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REPORT TO

STATE EVALUATION COMMITTEE ON TEACHER EDUCATION

on

NORTH CAROLINA STATE OF THE UNIVERSITY OF NORTH CAROLINA AT RALEIGH

by

THE VISITATION COMMITTEE
January 12-15, 1964

Division Of Professional Services
State Department Of Public Instruction
Raleigh, North Carolina

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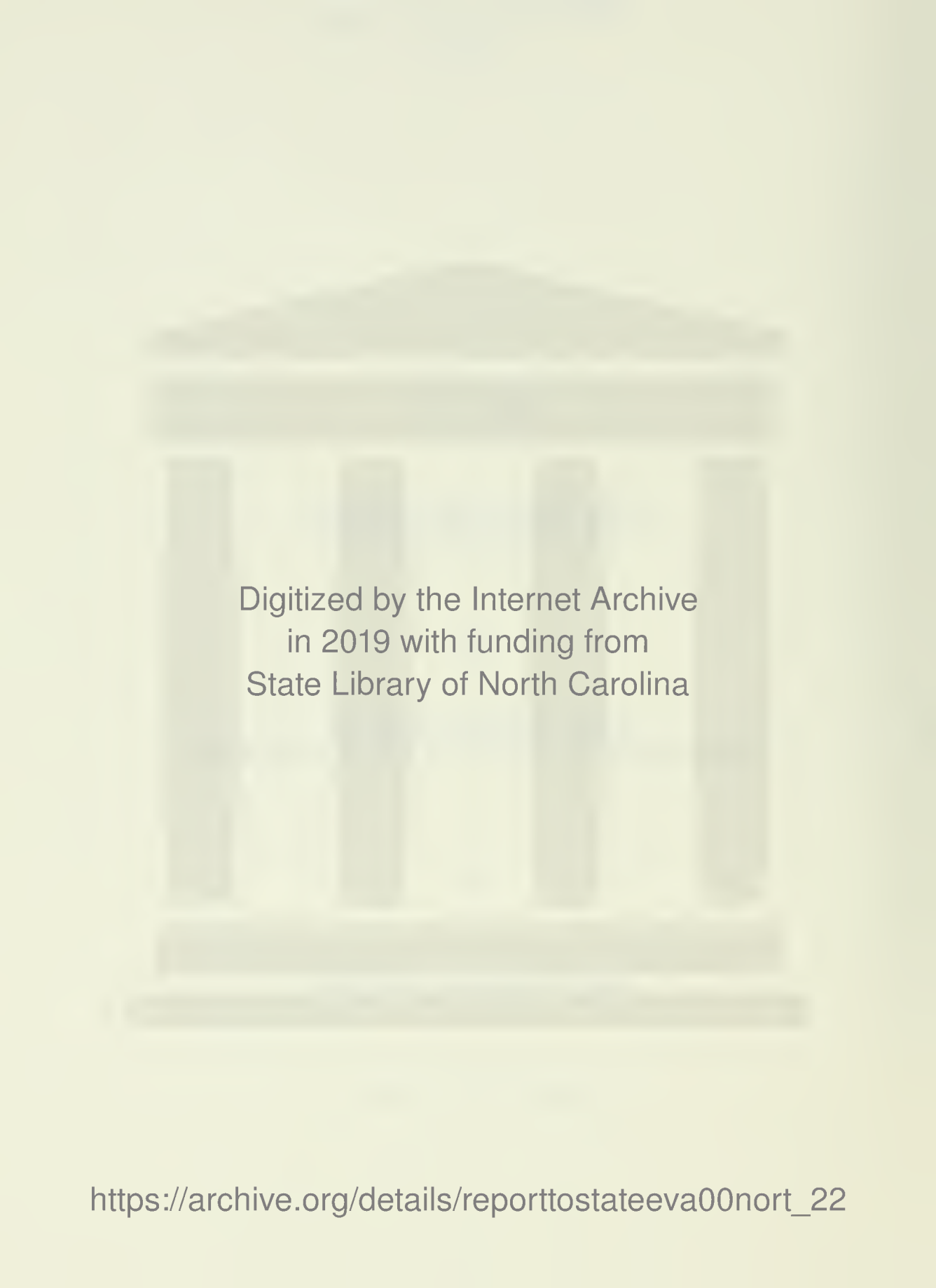
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TABLE OF CONTENTS

	Page
Introduction.	1
Committee Members	2
Undergraduate Programs.	3
Standard I--Over-All Policies.	3
Standard II--Student Personnel Programs and Services	11
Standard III--Faculty.	18
Standard IV--Curricula	22
Standard V--Professional Laboratory Experiences.	48
Standard VI--Facilities, Equipment, and Materials.	51
Graduate Programs	57
Standard I--Over-All Policies.	57
Standard II--Student Personnel Programs and Services	59
Standard III--Faculty.	63
Standard IV--Curricula	64
Standard V--Professional Laboratory Experiences.	81
Standard VI--Facilities, Equipment, and Materials.	82

INTRODUCTION

North Carolina State of the University of North Carolina at Raleigh was founded by legislative act on March 7, 1887 as North Carolina College of Agriculture and Mechanic Arts. The Federal Morrill Act of 1862 authorized the use of public land or equivalent in land script for the creation of such a college in each state.

The institution began operations with 45 students and six teachers on October 3, 1889. In 1962-63 the total enrollment was approximately 8,000 students with a teaching faculty of almost 700 members.

In 1917 the name of the institution was changed to North Carolina State College of Agriculture and Engineering. The General Assembly created the Consolidated University of North Carolina in 1931, making North Carolina State one of the component parts of the Consolidated University.

The 1963 General Assembly changed the name of the institution to North Carolina State of the University of North Carolina and specified that "The University of North Carolina [Consolidated] shall provide instruction in the liberal arts, fine arts, and sciences, and in the learned professions, including teaching--". (G. S. 116-15). Following this action, the North Carolina Board of Higher Education gave approval to North Carolina State to expand its curricula and to offer degrees in the liberal arts.

The traditional responsibility of land grant institutions such as North Carolina State has been of a scientific and technical nature. However, the institution established the School of Education in 1927 with a principal role being to provide professional education for certain areas of teachers and counselors. With the new administrative structure, the institution looks forward to expanding its programs of preparation to cover other professional school personnel.

The School of Education of North Carolina State offers programs leading to the degrees of Bachelor of Science, Master of Science, and Master of Education. At the undergraduate level, the School of Education offers programs for the preparation of teachers in agriculture, industrial arts, industrial education, mathematics, and science. By taking additional work, students enrolled in the Department of Recreation and Park Administration may meet the degree requirements and certification requirements as teachers of physical education and health.

At the graduate level, programs are offered for teachers of agriculture, industrial arts, industrial education, mathematics, and science. Programs are also offered in the special service personnel areas of counselor and school psychologist.

North Carolina State was visited on January 12-15, 1964, by the following committee, which herewith submits its report.

Dr. Robert Holt, Chairman
East Carolina College

Dr. J. P. Freeman, Consultant
State Department of Public Instruction

Dr. Robert Colver
Duke University

Mr. Samuel Stell
State Department of Public Instruction

Dr. John Yarbrough
Meredith College

Dr. James Valsame
State Department of Public Instruction

Dr. Ben Horton
Appalachian State Teachers College

Mr. A. G. Bullard
State Department of Public Instruction

Mr. G. T. Proffit, Supt.
Harnett County Schools

Mr. Charles D. Bates
State Department of Public Instruction

Dr. Ivey Gentry
Wake Forest College

Dr. Harry Beard
State Department of Public Instruction

Dr. Harold Barrow
Wake Forest College

Mr. Carroll Smith
State Department of Public Instruction

Miss Ella Stephens Barrett
State Department of Public Instruction

Dr. Jerry A. Hall
State Department of Public Instruction

UNDERGRADUATE PROGRAMS

STANDARD I--OVER-ALL POLICIES

A. Purposes and Objectives

North Carolina State of the University of North Carolina at Raleigh, founded by Legislative Act of March 7, 1887, opened on October 3, 1889 with an enrollment of 45 students. During the fall of 1963 the enrollment reached approximately 8,000. The School of Education of the institution was established in 1927 and is now the third largest in student body of the eight major divisions of the college.

As an institution, North Carolina State is dedicated to a program of science, technology, and research. It was resolved at the inception in 1887 that North Carolina could be and should be made more self-sufficient economically and less "dependent on the North for technical experts and manufactured articles of daily use." This concept has been maintained and intensified.

It is stated that the principal role of the School of Education is that of providing professional education for teachers, counselors, recreators, and psychologists. Therefore, the major effort in teacher education at North Carolina State coincides with the college's work as the center of science, technological education, and research for the State.

The undergraduate program in the Division of Teacher Education leads to a Bachelor of Science degree preparing teachers at the secondary level (junior and senior high school) in: agriculture, industrial arts, industrial education (trade and technical), mathematics, and science. The Master of Science or Master of Education degree is granted for majors in: agricultural education, industrial arts, industrial education, mathematics education, science education, occupational information and guidance, and school psychology. There are 3 programs within the School of Education which award a non-teaching degree, namely, School Psychology, Industrial Arts-Technical Option, and Recreation and Park Administration. By taking additional work (approximately 12 s.h.) in health and physical education, a student may become certified in health and physical education.

The philosophy of the teacher education program at North Carolina State emerges from certain basic beliefs and assumptions of the institution. The most pertinent of these are:

(1) The foremost concerns in the teacher education program deal with preparing effective school personnel in specialized areas, providing field services for school personnel, and conducting and interpreting research.

(2) The whole college has a part in the preparation of students enrolled in teacher education programs.

(3) All teacher education programs should include extensive professional laboratory experiences.

(4) A thorough knowledge of the subject material to be taught is a necessary requirement for effective teaching in any field.

(5) The program of all those who are preparing to teach should include a well planned program of general education and professional education.

Each department in the Division of Teacher Education has a statement of basic assumptions characteristic to the nature of the respective programs. For example, the department of agricultural education states that one of its most important functions is the development of leadership.

The following constitutes the institution's only formal statement of teacher education objectives. This statement was formulated by the School of Education but does not appear in the official college catalog.

> Departments in the Division of Teacher Education seek to assist students in developing certain competencies. Major concern is for improving skills, understandings, and attitudes of students in the mastery of subject matter and content in their areas of specialization, the teaching-learning processes, personal development and adjustment, and the improvement of practice in the teaching profession. The following statements are examples of abilities and competencies which the Division seeks to help students to develop or improve:
>
> a. <u>The Effective Ability to</u>:
>
> Apply basic principles of adolescent growth and development.
>
> Plan, guide, and evaluate learning situations for high school youth and adults.
>
> Become proficient in a specialized teaching field to the extent that workers in that field of work regard the graduate as one possessing the competencies needed to teach others in that area of specialization.

Make personal-social adjustment in such areas as physical and/or biological science, mathematics, humanities, and the social and behavioral sciences.

Recognize professional growth as an essential phase of effective teaching, supervision, and administration. The Division seeks to provide educational opportunities, including graduate opportunities, designed to assist public school personnel to grow professionally.

Interpret and promote the generally accepted functions of education in a democracy.

b. Essential Competencies for:

Identifying individual and group educational needs and opportunities of high school and/or adult students related to a specialized field of study.

Guiding high school and/or adult students in solving education problems in a specialized area.

Identifying and selecting appropriate resources to help students solve their educational problems in a specialized area.

Guiding high school and/or adult students in evaluating alternative solutions to their problems in an area of specialization.

Guiding individual high school students in improving occupational planning, self-discipline, leadership, and human relations.

Identifying, selecting, preparing and teaching subject-matter content appropriate for the educational level of various high school and/or adult groups in a specialized field of knowledge.

Planning for something to happen as a result of one's teaching.

B. Organization and Administration

1. Consolidated University

The University of North Carolina at Chapel Hill, North Carolina State of UNC at Raleigh, and UNC at Greensboro form the Consolidated University of North Carolina. The policy forming bodies of the Consolidated University are as follows:

a. The Board of Higher Education of the State of North Carolina, consisting of lay members appointed by the Governor and administered through an Executive Director, has approval authority on all new academic programs instituted in the public institutions of the State. Its function is to coordinate educational programs in public higher education in North Carolina.

b. The Board of Trustees of the Consolidated University is charged with the over-all supervision of the University. It includes 100 regular members (appointed by the State Legislature) and, in addition, the Governor and Superintendent of Public Instruction are ex-officio members.

c. The University Administrative Council is an advisory body of the President of the Consolidated University. Its membership consists of: the President: the Vice President for Graduate Studies and Research, the Business Officer and Treasurer, and the Secretary of the University. It also includes the Chancellors and Business Managers for each unit of the Consolidated University.

The principal administrative officer of the Consolidated University is the President.

2. North Carolina State

The policy forming bodies for North Carolina State are as follows:

a. The Administrative Council of North Carolina State serves as an advisory body to the Chancellor and includes the Chancellor, Academic Deans, Dean of Student Affairs, Business Manager, and Director of Foundations and Development.

b. The Faculty Senate acts as the voice of the Faculty. Each School elects its own representative to the Faculty Senate.

The Chancellor of North Carolina State is administratively responsible for all activities of that institution and is directly responsible to the President.

The major academic administrative units at North Carolina State are the Schools of Agriculture, Design, Education, Engineering, Forestry, Liberal Arts, Physical Sciences and Applied Mathematics, and Textiles. Other administrative units are the Division of Student Affairs, the College Extension Division, the Graduate School, the Department of Intercollegiate Athletics, the Business Office, the Office of Foundations and Development, and the College Television Station. Each School is administered by a Dean with direct responsibility to the Chancellor for items affecting that School.

3. The School of Education

As shown in Chart I, the School of Education is sub-divided into seven departments with a chairman for each. The Division of Teacher Education, created in 1962 to facilitate the coordination of the Departments of Agricultural Education, Industrial Arts, Industrial Education, Mathematics and Science Education, and Occupational Information and Guidance, assumed the major responsibility for coordinating the teacher education program.

The Dean of the School of Education is assisted by two special committees. The Advisory Committee, consisting of the chairmen of the respective departments in the School, assists with matters related to his administrative role. The Council on Teacher Education is concerned with the formulation of policies governing the teacher education program. The members of the Council are appointed by the Chancellor for three-year-staggered terms from the following areas:

<u>From the College</u> (Outside of the School of Education)

Agricultural Technology
Biological Science
Engineering
English
Humanities and Social Studies
Mathematics
Physical Science
Social Science

<u>From Public Education</u>

Curriculum Study, State Board of Education
Division of Professional Services, State Department of Public Instruction
North Carolina Education Association
Board of Higher Education

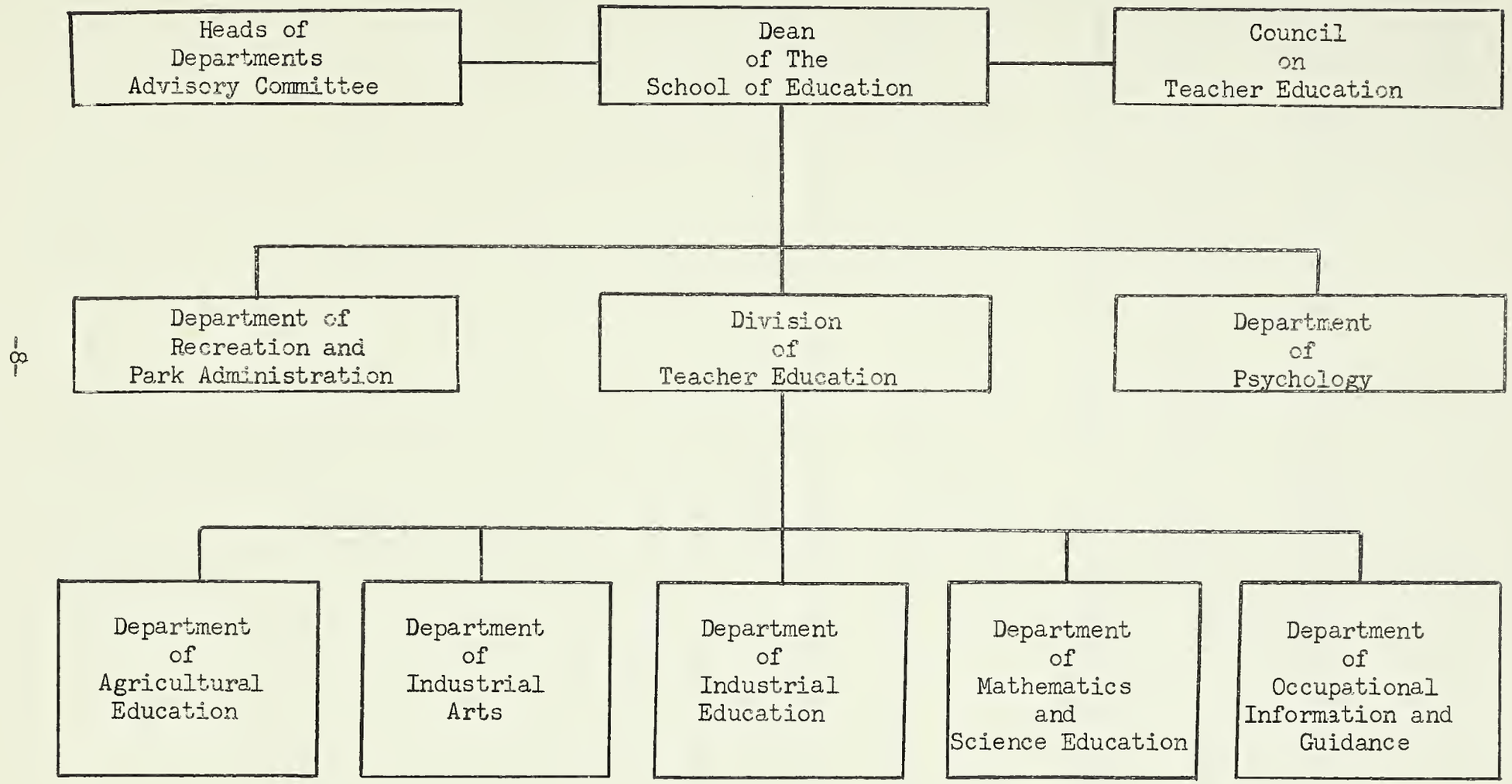
<u>From the School of Education</u>

Agricultural Education
Industrial Arts Education
Industrial Education
Math and Science Education
Occupational Information and Guidance
Psychology

CHART I

THE SCHOOL OF EDUCATION, NORTH CAROLINA STATE OF THE UNIVERSITY

OF NORTH CAROLINA AT RALEIGH


Heads of Departments Advisory Committee
Dean of The School of Education
Council on Teacher Education
Department of Recreation and Park Administration
Division of Teacher Education
Department of Psychology
Department of Agricultural Education
Department of Industrial Arts
Department of Industrial Education
Department of Mathematics and Science Education
Department of Occupational Information and Guidance

Ex-Officio

Dean of the Faculty
Dean, School of Education

The functions of the council are:

(1) Develop and recommend policy relative to teacher preparation and certification in the areas in which the School of Education is and should be engaged.

(2) Study, encourage, and facilitate cooperative development of programs of teacher preparation in the various teaching fields.

(3) Coordinate teacher education at North Carolina State through study, development and implementation of procedures relative to recruitment and selection, advisement, curriculum planning, laboratory experience, student teaching, and placement.

(4) Develop and recommend policy relative to professional services and professional improvement of teachers in service.

(5) Study, encourage, and facilitate procedures for continuous evaluation of the program of teacher education.

(6) Encourage research designed to improve the program of teacher education.

There are several other committees which augment the implementation of the teacher education program. Among these is the Course and Curriculum Committee, consisting of seven appointed members of the School of Education faculty and the Dean, which reviews suggested changes in courses and curricula of the School of Education initiated in the Departments. Approved changes are brought to the attention of the entire faculty of the School of Education for action. They are then forwarded to the Dean of the School of Education for approval or return to Committee for further study. Final approval is granted by the Dean of the Faculty.

Another Committee is the Coordinating Committee on Teacher Education. This Committee includes six members. Five members are nominated by the heads of the departments. The sixth member is the chairman of the Division of Teacher Education who serves as the chairman. This Committee and its operation appear to have their origin in the efforts of the Council on Teacher Education.

The Institution's self study stated that the responsibility for recommending teachers for certification is placed on the heads of the respective teacher education departments and the heads of the departments in which the students have specialized. It is not completely clear how this will be implemented in some areas.

STANDARD II--STUDENT PERSONNEL PROGRAMS AND SERVICES

A. Information on the Teaching Profession Provided to Prospective Teachers

The Division of Teacher Education sends brochures describing the opportunities in the teaching profession to high school counselors, principals, and teachers. The teacher education faculty visits local career days throughout the state.

Each department in the Division of Teacher Education has a club, (i.e., Agricultural Education Club, Industrial Arts Club, Mathematics and Science Club) which provides information about the teaching profession. The North Carolina State chapters of SNEA and Epsilon Pi Tau also disseminate information about the teaching profession.

Students enrolled in the introductory course in Psychology are informed about teaching and some change to teacher education programs as a result of this course.

However, there is no freshman class-wide orientation to opportunities in the teaching profession.

B. Admission Policies and Practices of the Institution

a. Admission to the College

To be admitted as a freshman, the applicant should be a graduate of an accredited high school. Graduates of non-accredited high schools and holders of high school equivalency certificates may be considered individually. The high school record must show at least 16 units of completed high school work and include 4 units of English, 3 units of algebra and geometry, 1 unit of United States history, and 2 units of natural science. Of the additional units, not more than one will be accepted from activity courses. Applicants must take the Scholastic Aptitude Test of the College Entrance Examination Board and it is recommended that applicants present scores on the College Entrance Examination Board Achievement Tests in English Composition, Mathematics, and Chemistry. The score on the combined mathematical and verbal portions of the College Board

Examination must be at least 750 with a minimum of 300 in each portion. Scores on the Scholastic Aptitude Test, together with the high school record, are considered in determining admissibility.

The high school class rank and score on the College Entrance Examination Board Scholastic Aptitude Test are combined with other factors in a formula devised by the Office of Admissions and Registration to determine the predicted grade point average. This predicted grade point average, together with the units indicated on the high school record, becomes the ultimate factor in determining admission. The predicted grade point average must be 1.4 or greater for admission. If all of these indicator scores are attained, the applicant is admitted without review. Where this is not the case, the individual's application is reviewed by the Admissions Committee. For out-of-State students, individual schools may set higher requirements.

For the fall semester, 1962, 2,776 persons made application for admission to North Carolina State. Of these, 2,195 were accepted by the Office of Admissions and Registration and 1,482 actually enrolled. For the fall semester, 1962, 60 new students applied for admission to teacher education curricula in the School of Education. Of these 53 were accepted and 40 enrolled.

b. Data on Undergraduate Students

The characteristics of the entering group of students in education in comparison with their peers in other curricula are presented in Table 2. Similarly, comparisons are made in the junior class and in the most recent graduating class. Table 2 indicates that freshmen in education are below the all-college average in regard to freshman test scores, but are equal or better in class rank. These differences in aptitude scores also occur in the junior and senior classes, but education students make comparable grades.

Table 3 shows the performance of North Carolina State teacher education students on the National Teacher Examination. North Carolina State students

scored at the national means for the common weighted score and slightly exceeded the national means in the Science and Mathematics and Non-Verbal Reasoning sections of the Examination.

C. Admission to Teacher Education Programs

The admission policies of the Division of Teacher Education are identical with those of the College. The School of Education does not have a committee to pass upon admission of prospective students to teacher education curricula.

Admission to teacher education programs occurs at all levels. Persons who enter the college as freshmen and indicate an interest in teacher education at that time are assigned an advisor in the School of Education and may be considered as having been admitted to the program. However, to an increasing degree, students are entering at the sophomore and junior years. In all programs, students are identified upon entering at any level as students in Agricultural Education, Industrial Arts Education, Mathematics Education, Science Education, or Industrial Education.

Transfer students start at the beginning of the various sequences of the curricula and achieve as rapidly as possible a status equivalent to that of classmates. Courses are rarely taken out of sequence. Some students majoring in academic areas such as mathematics and biology also take enough education courses to be certified as teachers. Such students will be admitted to the Division of Teacher Education in their junior year but are not considered as being in the regular teacher education program and do not earn a B.S. degree in Education.

D. Scholarship Requirements

Students who have 40 or more semester hours of college credit are expected to maintain a 2.0 ("C") quality point average. Students who have fewer than 40 semester hours are expected to maintain a 1.5 (D=1, C=2) quality point average. Any student who fails to meet these standards is placed on provisional status. Students have two semesters in which to remove quality point deficiencies.

TABLE 2

DATA ON STUDENTS IN TEACHER EDUCATION
AND OTHER STUDENTS AT NORTH CAROLINA STATE

	Predicted Grade Point Average	High School Rank Quintiles Per cent of Group in Each Quintile Shown					College Board Score		Actual Grade Point Average
		1	2	3	4	5	Verbal	Math	
Teacher Education Freshmen	1.89	48	25	25	0	3	414	505	
All College Freshmen	2.04	50	30	12	5	1	464	550	
Teacher Education Juniors		46	31	19	3	0	399	495	2.34
All College Juniors		46	38	8	8	0	458	533	2.40
Teacher Education Seniors		47	30	16	7	0	417	497	2.54
All College Seniors		62	24	8	4	2	456	550	2.44

TABLE 3

MEAN SCORES ON NATIONAL TEACHER EXAMINATION

	N	Professional Information	English Expression	Soc. Science Fine Arts	Science Math	Non-Verbal Reasoning	Weighted Common Exam Total
North Carolina State College Scores 1961-62	122	56	56	53	67	63	584
North Carolina Statewide Scores 1960-61		54.8	55.8	52.5	54.7	55.4	545
National Mean 1957-1961		58.1	58.3	56.7	59.1	58.8	581

Students transferring to the School of Education from other institutions must have an over-all "C" average on work rostered to be eligible for admission. In addition to the quality point average requirement, a student must pass a minimum of 6 semester hours of course work during the first semester in residence and a minimum of 8 semester hours each succeeding semester to be eligible to continue. Students failing to meet the scholarship requirements (semester rule or quality point average) may apply to the Admissions Committee for readmission.

In teacher education curricula, students must have a 2.0 quality point average to enroll in senior level courses and student teaching.

A student is eligible for graduation when he has completed all the requirements of his curriculum and has earned at least an accumulated 2.0 average.

Students making an "F" on a required course must repeat the course and use the acquired passing grade in computing the quality point average. Students failing an elective course may repeat. Required and elective repeats are limited to 15 semester hours. In essence, within the above limits, the quality point average is determined on hours completed successfully rather than on hours attempted.

E. Student Advising

Most of the orientation in the School of Education at North Carolina State is done in groups, followed by individual conferences with faculty advisers and Departmental Heads. The Dean of the School of Education presides at a meeting of new freshmen interested in teacher education on the first day of orientation. The Dean welcomes the group, tells them something of the history of the School, the different departments in the School, opportunities for graduates, and other information about the students' future program at North Carolina State. The students then adjourn to departmental meetings where more detailed information is given.

Each student is assigned a faculty adviser. If the adviser feels the student requires professional counseling, he refers him to the Counseling Center.

F. Records

Records on all students are kept in the office of the Dean of the School of Education and in the office of each Department Head. Records in the Dean's office are readily available to all faculty members and contain the following information: Courses taken at the College with grades earned; marital status; parent's name, address, occupation; church preference; work experience; hobbies; high school record; rank; honors; standardized test scores; whether transfer student; whether on probation; and any pertinent notes.

G. Placement

North Carolina State does not have a central placement office. Each School handles the placement of its own graduates. In the School of Education, the Dean coordinates the placement service with the Department heads. Each semester the Dean sends to all superintendents in North Carolina, and to superintendents in other states who normally hold interviews on campus, a brief sketch of each graduating senior and arranges on-campus interviews with school administrators.

Each Department in meetings with graduating students discusses placement possibilities, characteristics of the various schools, and salary range. Department heads play the major role in teacher placement, soliciting information about positions, contacting employers, preparing recommendations and advising students. Most of the students are placed well in advance of graduation, since the demand greatly exceeds the supply.

H. Evaluation of Teacher Education Programs

In one view, effectiveness can be judged by the effect that recent graduates have upon society. Almost all recent graduates are productively employed. A considerable portion of graduates in the various curricula teach in public schools; a majority of the remainder enter business or industry, the armed forces, or pursue graduate study.

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Some evaluation by former students is attempted in follow-up procedures surveying recent graduates. Further informal work is done with a follow-up of beginning teachers. In all departments, faculty members are encouraged to see in-State teachers at least once during their beginning year as a means of evaluating effectiveness of the teacher education program.

The Council on Teacher Education and advisory groups within each curriculum continuously evaluate the program and suggest changes and modifications of programs as deemed necessary.

An objective measure of the over-all effectiveness of programs is indicated by results on the National Teacher Examination. North Carolina State graduates score slightly, but insignificantly, above the national average on scores on the Common Examination and above the average of North Carolina graduates. In Professional Information, English Expression, Social Studies, Literature, and Fine Arts, State's students score on a par with students in the State and are among the highest in Science and Mathematics, and in Non-Verbal Reasoning sub-tests.

I. Recommendation Procedure

The head of the department of teacher education in which a student majors is technically responsible for recommending the graduates for certification. However, the implementation has not been clarified and there is some misunderstanding as to who will certify from some areas.

STANDARD III--FACULTY

A. Faculty for Teacher Education

There is an unusual arrangement of faculty for teacher education at North Carolina State. There is no professional education faculty *per se*. Faculty members are designated as being in particular departments of the School of Education.

1. Number and Preparation

There are 33 faculty members in the School of Education. Of this number, 22 teach professional education courses and are listed as members of the following departments:

Number	Department
5	Agricultural Education
5	Industrial Arts
2	Industrial Education
3	Mathematics and Science Education
2	Occupational Information and Guidance
3	Psychology
2	Recreation and Park Administration

The remaining 11 faculty members of the School of Education are in the Departments of Industrial Arts, Psychology, and Recreation and Park Administration where they teach students enrolled in the industrial arts technical option, general and specific psychology other than that related to education, and the recreation and parks curriculum.

Only one faculty member of the School of Education does any teaching outside the School. A faculty member of the Department of Mathematics and Science Education teaches one course in the Department of Mathematics each semester.

Degrees held by the faculty of the School of Education compare favorably with the faculty as a whole.

Degree	Per Cent Education	Per Cent College
Bachelor	0.0	12.9
Master	9.1	27.9
Dissertation pending	18.2	8.6
Doctor	72.7	50.6

Each faculty member in the School of Education has at least a master's degree with a major in the area of his teaching assignment.

Faculty rank in the School of Education also compares favorably with the rest of the college.

Rank	Per Cent School of Education	Per Cent Total Faculty
Instructor	9.0	17.3
Assistant Professor	31.8	25.3
Associate Professor	31.8	25.4
Professor	27.4	32.0

The age distribution of the School of Education faculty covers a wide range with the heaviest concentration in the 46-50 group (1962).

Age	Number
31-35	3
36-40	2
41-45	4
46-50	8
51-55	1
56-60	2
60-61	2

An analysis of the data on teaching experience shows that the teacher education faculty possesses teaching experience ranging from the elementary school to the graduate level. Eighty-six per cent of the faculty has had teaching experience in

public schools and 55 per cent in colleges prior to joining the faculty at North Carolina State.

2. Load

The maximum teaching load for staff members not having administrative duties is normally four courses, or twelve semester hours. When staff members are assigned research and/or other professional service duties, their teaching load is reduced accordingly. In practice, only 33 per cent of the faculty teach as many as four courses. The student load per faculty member ranges from 17 to 90, with an average of 49 registrants. Supervisors of student teachers are supposed to have work assignments equated in terms of 20 students as a full load. In mathematics and science the load is heavy in the fall and light in the spring.

The faculty members of the Summer School are usually regular North Carolina State faculty members. The School of Education brought three visiting professors to the campus, two with the doctor's degree and one with the master's degree, during the summer of 1961 and three, all with the doctorate, during the summer of 1962.

All evening, extension, and Saturday teaching is done by regular institutional faculty members and is counted as part of their regular loads. Provision has been made for extra pay for faculty members if their teaching loads exceed fifteen semester hours due to teaching extension, evening, or Saturday courses in off campus centers.

3. Faculty Improvement and Vitality

During the past five years, six members have been added to the School of Education faculty as replacements. Of these, four had the earned doctorate and two the master's degree. During the same period, five new faculty members were added. Of these, three had the earned doctorate and two the master's degree.

There is evidence that the members of the School of Education staff are interested in professional growth. Several members are currently striving for doctorates, and three of the present faculty have completed requirements for the doctorate since accepting positions at the institution.

No leave of absence with pay is provided. However, leave of absence without pay is granted upon request. Two members of the present faculty have availed themselves of this opportunity for further study.

Members of the School of Education faculty are encouraged to attend and take active part in professional meetings. Each faculty member belongs to at least one professional organization and most are affiliated with national organizations. The travel budget of the School of Education is normally sufficient to defray travel expenses of staff members, but priority is given to those who hold office or have program commitments.

B. Academic Faculty

The institution's faculty, other than that of the School of Education, is composed of more than 650 teaching and research members. One difficulty in a pin-point classification of the faculty is the multitude of School and Departmental structures and classifications. Nevertheless, it is felt by the Visitation Committee that the academic faculty is adequate in number and preparation to provide the subject matter work in the programs of preparation for prospective teachers.

STANDARD IV--CURRICULA

The School of Education offers a four-year undergraduate program for the preparation of teachers in the following areas: Agriculture, industrial arts, industrial education, science (biology, chemistry, physics, and earth science) and mathematics. Students enrolled in the Department of Recreation and Park Administration by electing courses in addition to those required for the fulfillment of the B.S. degree in Recreation and Park Administration may meet the standards and guidelines recommended for teachers of physical education and health.

The regular undergraduate enrollment at North Carolina State during the 1962-63 academic year was 6015, of whom 1847 were classified as freshmen, 1728 as sophomores, 1166 as juniors, and 1274 as seniors.

The enrollment in teacher education by areas of specialization during 1962-63 is shown in Table 4.

TABLE 4

ENROLLMENT OF STUDENTS IN TEACHER EDUCATION CURRICULA

1962-63

	Fr.	So.	Jr.	Sr.	Total
Agricultural Education	28	33	20	27	108
Industrial Arts Education	19	35	8*	7	69*
Industrial Education	1	1	0	0	2
Math Education	25	11	21	29	86
Science Education	7	4	8	11	30
TOTAL	80	84	57	74	295

*In industrial arts education, students elect teaching or technical curriculum at the end of the sophomore year.

The remainder of the report on Standard IV is presented in terms of and in relation to the prescribed guidelines.

A. General Education

The general education requirements for prospective teachers vary within the five curricula from 58 to 75 semester hours and from 42% to 55% of the course hours necessary to complete a four-year curriculum.

Common elements in all teacher education curricula are as follows:

In the area of communications and humanities, all curricula require two years (12-15 semester hours) of English, including six semester hours of grammar and composition. One course in general psychology and one course in fine or applied arts is also required.

All curricula require a minimum of eight semester hours in the natural sciences.

All curricula require a minimum of eight semester hours in mathematics.

All curricula require twelve semester hours in the social and behavioral science and include one course each in history, economics, political science, and sociology.

Two years of physical education and two years of military or air science are required unless students are exempt for prior military service.

In more detail, the courses which relate to the guidelines for general education are listed, and the exceptions specified or required by each department are cited.

GUIDELINE 1 (12 s.h.): The program should assure that all teachers are able to read, write, and speak the English language clearly and effectively.

ENG 111, 112	English Composition	6 s.h.
ENG ___	Speech elective	3 s.h.
ENG ___	Writing elective	3 s.h.

Exceptions

Programs in Mathematics, Science Education, and Health and Physical Education require English 231, Basic Speaking Skills, to meet the speech requirement.

The program in Health and Physical Education requires English 215, Principles of News Writing, in place of the writing elective.

The program in Industrial Education does not require a writing elective. Students select either writing or literature.

GUIDELINE 2 (12 s.h.): The program should develop a critical understanding of and a sensitiveness to the aesthetic, philosophical, ethical, and imaginative values expressed in literature, art, music, religion, and philosophy.

ENG ___	Literature elective	3 s.h.
PSY 200	Introduction to Psychology	3 s.h.
	Elective in fine or Applied Arts	3 s.h.
	Elective in Philosophy or Religion	3 s.h.

Exceptions

The program in Industrial Education lists only 6 semester hours.

English elective (writing or literature)		3 s.h.
PSY 200	Introduction to Psychology	3 s.h.

The program in Industrial Arts Education lists 12 semester hours.

ENG ___	Literature elective	3 s.h.
PSY 200		3 s.h.
IA 315	General Ceramics	3 s.h.
IA 205	Industrial Arts Design	3 s.h.

Programs in Mathematics and Science specify areas of selection in the areas of the arts and philosophy:

Music 200 or Art 200	Music in Contemporary Life Visual Arts in Contemporary Life	3 s.h.
PHI 201 or PHI 405	Logic Foundations of Science	3 s.h.

The program in Health and Physical Education, in addition to literature and Psychology 200, adds the following:

Elective: Philosophy, Fine or Applied Arts, Religion		3 s.h.
LA 201	Introduction to Landscape Architecture	3 s.h.

GUIDELINE 3 (12-15 s.h.): The program should develop an understanding of the development of world civilization, an understanding of the basic concepts of the social studies, and an understanding of democracy as a way of life.

Elective: History		3 s.h.
PS 201	The American Governmental System	3 s.h.
EC 205	The Economic Process	3 s.h.
SOC 202	Principles of Sociology	3 s.h.

Exceptions

In addition to the 12 hours above:

The program in Industrial Education requires SOC 401, Human Relations in Industrial Society (3 s.h.).

The program in Industrial Arts requires IA 480, Modern Industries (3 s.h.).

The program in Health and Physical Education and Health substitutes SOC 301, Human Behavior, for SOC 202.

The program in Agricultural Education permits the following changes:

Political Science elective in lieu of PS 201.

EC 201, Economics, is required instead of EC 205.

RS 301, Rural Sociology, is required instead of SOC 202.

GUIDELINE 4 (11-23 s.h.): The program should develop an appreciation and understanding of the structure of science, of scientific inquiry, and of the main scientific principles.

The science requirement varies from 11 to 23 semester hours as follows:

Agricultural Education (21 s.h.)

BO 103	General Botany	4 s.h.
ZO 103	General Zoology	4 s.h.
CH 101, 103	General Chemistry	8 s.h.
PY 221	College Physics	5 s.h.

Industrial Arts and Industrial Education (12 s.h.)

PH 211, 212	General Physics	8 s.h.

CH 101	General Inorganic Chemistry	4 s.h.

Mathematics and Science Education (23 s.h.)

BS 100	Biological Science	4 s.h.
CH 101, 103	General Chemistry	8 s.h.
PY 211, 212	General Physics	8 s.h.
MIG 120	Physical Geology (Science Education)	3 s.h.

Program in Health and Physical Education.

BO 103	General Botany	4 s.h.
ZO 103	General Zoology	4 s.h.
HS 342	Landscape Gardening	3 s.h.

GUIDELINE 5 (8 s.h.): <u>The program should develop an appreciation of the structure and application of mathematics</u>.

MA 111	Algebra and Trigonometry	4 s.h.
MA 112	Analytical Geometry and Calculus	4 s.h.

<u>Exceptions</u>

Programs in Industrial Education and Industrial Arts permit MA 122, Mathematics of Finance and Elementary Statistics, in place of MA 112.

The program in Health and Physical Education requires MA 122 instead of MA 112.

The program in Science Education gives a choice between MA 111, and 112 or 102.

The program in Mathematics Education requires MA 111 and 102.

GUIDELINE 6 (8 s.h.): <u>The program should develop the knowledge, habits and attitudes necessary to achieve and maintain sound physical and mental health</u>.

PE 101, 102, 201, 202	4 s.h.

Freshmen are given a standardized test on personal and community hygiene. Those who fail the test are required to take hygiene concurrently with PS 101.

Military or Air Science	4 s.h.

Exceptions

The program in Industrial Education also requires REC 333, First Aid and Safety (2 s.h.).

The program in Health and Physical Education requires the following in addition to the above:

RPA 354	Personal and Community Hygiene	3 s.h.
ZO 212	Human Anatomy	3 s.h.
ZO 213	Human Physiology	3 s.h.

B. Subject-Matter Areas

Agricultural Education

The major objective of the program in agricultural education is to provide opportunities for developing effective educational leaders in agriculture. Although the main concern is the development of leaders to teach agriculture in the public schools, graduates in considerable numbers become agricultural extension workers, soil conservationists, employees of agricultural businesses, and agricultural administrators.

Students enrolled in the curriculum are required to complete 57 semester hours in subject matter courses.

The institution relates the guidelines to subject matter preparation as follows:

GUIDELINE 1: The program should provide a broad understanding of the biological, physical, and applied sciences.

Preparation in this area includes a minimum of 3 semester hours in a biological science elective from such courses as General Bacteriology, Plant Physiology, Introduction to Economic Insects, Principles of Genetics, Plant Diseases, and Poultry Diseases. The following courses are also included:

CH 101	Chemistry I	4 s.h.
CH 103	Chemistry II	4 s.h.

BO 103	General Botany	4 s.h.
PY 221	College Physics	5 s.h.
ZO 103	General Zoology	4 s.h.

GUIDELINE 2: The program should provide technical agriculture subjects sufficiently broad in scope and sufficiently flexible that students may study in general agricultural areas.

Preparation in technical agriculture includes a minimum of 33 semester hours from the following courses:

Introduction to Agriculture--A study of agriculture as a profession and as it relates to the entire economy of the United States. (1 semester hour; freshman year)

Farm Machinery--A study of farm machinery beginning with the materials of construction as related to other factors; service and adjustment of the machinery; consideration of the conditions under which it must operate; and the selection, management, and economics of owning and operating machinery. (4 semester hours; sophomore year)

Farm Structures--A study of the role of farm structures in a rapidly changing agricultural situation. (3 semester hours; junior year)

Economics of Agriculture--An introduction to the economic principles underlying agricultural production and marketing. (3 semester hours; sophomore year)

Organization and Business Management of Farms--A study and application of the basic economic principles and techniques in organizing a farm business. (3 semester hours; junior year)

Organization and Business Management of Marketing Firms--A study of the agricultural marketing system and the current economic forces affecting its structure and efficiency. (3 semester hours; junior year)

Introduction to Social Research--A basic understanding of the methods of sociological research. This course is taught during the fall semester of the

senior year. Laboratory work is done in conjunction with student teaching. (3 semester hours; senior year)

Soils--A study of the fundamental properties of soils and their relation to proper soil management. (4 semester hours; junior year)

Agriculture Electives--The curriculum provides for 9 semester hours of agriculture electives. Students select courses from agriculture offerings which, together with required courses, result in 12 semester hours in an area of specialization such as: agricultural economics; agricultural engineering; animal science; plant science; poultry; rural sociology; soils; forestry; and processing, packaging and marketing. (9 semester hours; freshman and junior years)

GUIDELINE 3: The program should provide an opportunity for limited specialization based upon the vocational agriculture curriculum in high schools or industrial education centers and individual needs.

Agriculture electives described in Guideline 2 are used for complying with this guideline. By using their electives wisely students have an opportunity for limited specialization in any area of agriculture. Required courses in the curriculum provide a base for further study in: (1) agricultural engineering, rural sociology, and agricultural economics. By using the free elective (3 semester hours) and the agriculture electives (9 semester hours) in one area of agriculture, students may specialize up to 12 semester hours in one of the major areas of agriculture named in Guideline 2.

GUIDELINE 4: The program should provide sufficient preparation for the later pursuit of graduate work in agriculture.

Agricultural education graduates are eligible for consideration for graduate study in the several fields of agriculture provided at North Carolina State. Students who plan to continue their education in a specialized area of agriculture are advised to select electives in their proposed specialty.

Industrial Arts

The program for preparation of industrial arts teachers relates to the guidelines as shown below.

GUIDELINE 1: <u>The program should provide for breadth of study, at the college level, of the several areas included in the high school industrial arts curriculum.</u>

Required courses:

IA 102	Fundamentals of Materials and Processes	4 s.h.
IA 105	Drafting	4 s.h.
IA 109	Wood Processing	4 s.h.
IA 205	Industrial Arts Design	3 s.h.
IA 210	Metal Technology	4 s.h.
IA 306	Graphic Arts	4 s.h.
IA 312	Electricity-Electronics	4 s.h.
IA 315	General Ceramics	3 s.h.

GUIDELINE 2: <u>The program should take into account the need for study in depth in at least one area of the high school industrial arts program.</u>

The student will select from the following departmental courses to provide depth of study in one or more industrial arts areas:

IA 203	Technical Sketching	2 s.h.
IA 230	House Planning and Construction	3 s.h.
IA 310	Machine and Foundry Practicum	3 s.h.
IA 311	Metal Fabrication	3 s.h.
IA 412	Electrical Practicum	3 s.h.
IA 570	Laboratory Problems in IA. (Area of specialization)	3-6 s.h.

In addition, the student is encouraged to select from the following courses offered by other departments.

FOR 201	Wood Structure and Properties	3 s.h.

FOR 301	Wood Processes I	3 s.h.
ME 102	Engineering Graphics II	1 s.h.
EE 201	Elementary Circuits and Fields	4 s.h.
EE 202	Elementary Circuits and Fields	4 s.h.

GUIDELINE 3: The program should include study in related areas, to give an understanding of the basic objectives of industrial arts and the skills necessary for their implementation.

Required courses:

IA 100	Introduction to Industrial Arts	1 s.h.
IA 480	Modern Industries	3 s.h.
IA 465	Independent Study	3 s.h.
ECO 205	Economic Processes	3 s.h.
PY 211	General Physics	4 s.h.
PY 212	General Physics	4 s.h.
CH 101	General Chemistry	4 s.h.
MA 111	Algebra and Trigonometry	4 s.h.
MA 112	Analytic Geometry and Calculus	4 s.h.
or		
MA 122	Mathematics of Finance and Statistics	4 s.h.

GUIDELINE 4: The program should include experiences in the techniques especially appropriate to the teaching of industrial arts.

Required courses:

ED 422	Methods of Teaching Industrial Subjects	3 s.h.
IA 304	General Shop Organization	2 s.h.
IA 484	School Shop Planning and Equipment Selection	3 s.h.

Efforts are made to coordinate theory (ED 422) and application (IA 304) by teaching these in a block of time directed toward the school laboratory situation.

GUIDELINE 5: The program should include sufficient preparation for the later pursuit of graduate work in industrial arts.

The undergraduate industrial arts teacher preparation curriculum is felt to prepare talented students for later pursuit of graduate studies.

Industrial Education

The subject matter program includes 39 semester hours, approximately 30% of the total program, and is related to the guidelines in trade and industrial education as shown below.

GUIDELINE 1: The program should provide knowledge and competencies in planning, organizing, administering, supervising, evaluating, and interpreting the various aspects of the program of trade and industrial education.

ED 100	Introduction to Industrial Education	2 s.h.
ED 327	History and Philosophy of Industrial Education	3 s.h.

GUIDELINE 2: The program should include the area of Public and community relations.

ED 305	Analysis of Technical Education Programs and Course Construction	3 s.h.
IE 310	Industrial Safety	2 s.h.
ED 405	Industrial and Technical Education	
	Shop and Laboratory Planning	3 s.h.
ED 422	Methods of Teaching Industrial Subjects	4 s.h.
ED 516	Community Occupational Surveys (taken as elective)	3 s.h.
EC 425	Industrial Management	3 s.h.
EC 432	Industrial Relations	3 s.h.

GUIDELINE 3: The program should provide for basic knowledge in counseling and guidance.

ED 420	Principles of Guidance	2 s.h.

GUIDELINE 4: The program should provide opportunities in the area of industrial cooperative training.

*ED 521	Organization of Related Study Materials	3 s.h.
*ED 528	Principles and Practices in Industrial Cooperative Training	3 s.h.

*Taken as elective for ICT Coordinators. Trade teachers will take I.A. or Engineering Shop and/or Laboratory courses appropriate to their area of specialization. Total of 15 hours must be selected of which ED 521 and ED 528 constitute 6 hours for ICT Coordinators.

GUIDELINE 5: The program should provide sufficient preparation for later pursuit of graduate study in trade and industrial education.

The preparation as outlined in the undergraduate program provides sufficiently for a person to pursue graduate study.

Mathematics

The subject-matter preparation for a prospective mathematics teacher includes a total of 28 or 31 semester hours in mathematics and 3 semester hours in statistics or approximately 23%-25% of the four-year program.

GUIDELINE 1: The program should take into consideration the sequential nature of mathematics and should provide the prospective teacher an understanding of some of the aspects of mathematics which his students will meet in subsequent courses.

MA 111	Algebra and Trigonometry	4 s.h.
MA 102	Analytic Geometry and Calculus I	4 s.h.
MA 201	Analytic Geometry and Calculus II	4 s.h.
MA 202	Analytic Geometry and Calculus III	4 s.h.

A student is required to make Mathematics 111 or to show by test this level of proficiency.

GUIDELINE 2: The program of mathematics should include a thorough college-level study of the subjects in mathematics included in the high school curriculum.

MA 403	Fundamental Concepts of Algebra	3 s.h.
MA 404	Fundamental Concepts of Geometry	3 s.h.

GUIDELINE 3: The program should include additional upper-level work in mathematics, with courses chosen for their relevance to the high school curriculum.

MA 408	Advanced Geometry	3 s.h.
MA 433	History of Mathematics	3 s.h.

GUIDELINE 4: The program should include work in areas related to mathematics.

ST 361	Statistics for Engineers	3 s.h.
PY 223	Astronomy and Astrophysics	3 s.h.

GUIDELINE 5: The program should include sufficient preparation for later pursuit of graduate work in mathematics.

MA ___ 3 s.h.

This course may be chosen from the offerings of the Department of Mathematics. It must be in the 300 or 400 series and cannot be any one of the required courses above.

Science Education

GUIDELINE 1: The program should take into account the necessity of having a broad foundation in biological and physical sciences and mathematics.

BS 100	General Biology	4 s.h.
CH 101, 103	General Chemistry	8 s.h.
PY 211, 212	General Physics	8 s.h.
MIG 120	Physical Geology	3 s.h.
MA 111, 112	Algebra and Trigonometry, Anal. Geom. and Calculus A	
or		
MA 111, 102	Algebra and Trigonometry, Anal. Geom. and Calculus I	8 s.h.

GUIDELINE 2: The program should have depth in at least one area of science, with courses chosen for maximum relevance to the high school science curriculum.

Biological Science

BO 421--4 s.h.

GN 411--4 s.h.

ZO 301--4 s.h.

CH 220--4 s.h.

Chemistry

CH 220--4 s.h.

CH 215--4 s.h.

CH 231--4 s.h.

MA 201--4 s.h.

MA 202--4 s.h.

Physics

PY 223--3 s.h.

PY 407--3 s.h.

PY 410--4 s.h.

MA 201--4 s.h.

MA 202--4 s.h.

Earth Science

MIG 222--3 s.h.

MIG 208--3 s.h.

PY 223--3 s.h.

GUIDELINE 3: The program should include a sufficient basis and preparation for later graduate study in a particular science area.

The following requirements in semester hours in each area are to be taken in courses not offered to meet any other requirements listed above:

Biology electives	9 s.h.
Chemistry electives	4 s.h.
Physics electives	6 s.h.
Earth Science electives	15 s.h.

Physical Education and Health

Students in this area must major in recreation and parks administration and meet degree requirements in that department. If the student wishes to be certified in physical education, he must meet the requirements outside of the major. Thus meeting physical education and health requirements would involve 152 semester hours.

GUIDELINE 1: The program should lead to the development of principles compatible with current educational philosophy.

RPA 253	Principles of Physical Education	3 s.h.

GUIDELINE 2: The program should provide basic knowledge in the sciences.

BO 103	General Botany	4 s.h.
ZO 103	General Zoology	4 s.h.
ZO 212	Human Anatomy	3 s.h.
ZO 213	Human Physiology	3 s.h.
RPA 360	Individual Corrective & Adapted Activities	3 s.h.

GUIDELINE 3: The program should provide for knowledge and competencies in regard to organizing, planning, administering, and evaluating the various aspects of the total program of physical education.

RPA 301	Organization and Administration of Physical Education	3 s.h.
RPA 451	Facility and Site Planning	3 s.h.
RPA 315	Prevention and Care of Athletic Injuries	2 s.h.
RPA 333	First Aid and Safety	2 s.h.
RPA 360	Individual Corrective and Adapted Activities	3 s.h.

GUIDELINE 4: The program should provide knowledge of and skill in a wide variety of activities; ability to analyze motor skills; and knowledge of methods and materials in teaching and coaching.

RPA 153	The Aquatic Program	2 s.h.
RPA 201	Playground Leadership (games, contests, replays)	3 s.h.
RPA 255	Social Recreation (rhythms and dance)	4 s.h.
RPA 353	Camp Organization and Leadership (camping skills)	3 s.h.

RPA 355	Sports in Recreation (individual, dual and team sports)	4 s.h.
RPA 365	Methods & Materials in Health and Physical Education	3 s.h.

GUIDELINE 5: The program should develop knowledge and understandings in the various aspects of healthful living.

PE 101	Physical Education	1 s.h.
ZO 212	Human Anatomy	3 s.h.
ZO 213	Human Physiology	3 s.h.
RPA 315	Prevention and Care of Athletic Injuries	2 s.h.
RPA 333	First Aid and Safety	2 s.h.
RPA 354	Personal and Community Hygiene	3 s.h.

GUIDELINE 6: The program should develop competencies that will enable the teacher to plan or assist in planning and conducting programs of health services, healthful living, and health instruction.

PE 101	Physical Education	1 s.h.
RPA 301	Organization and Administration of Physical Education	3 s.h.
RPA 360	Individual Corrective and Adapted Activities	3 s.h.
RPA 365	Methods and Materials in Health and Physical Education	3 s.h.
RPA 480	Student Teaching in Physical Education	6 s.h.

GUIDELINE 7: The program should include sufficient preparation for later pursuit of graduate study in the area of physical education and health.

All the above courses are prerequisite to a graduate program and provide a substantial background for advanced study. In addition the following courses are required:

RPA 591	Special Problems in Recreation	3 s.h.
SOC 416	Research Methods	3 s.h.

C. Professional Education

The requirements in professional education for the programs offered at North Carolina State constitute approximately 16 per cent of the total undergraduate requirements. Industrial education is an exception, devoting 23 per cent to professional education.

Professional education requirements in the respective areas are as follows:

Agricultural Education

Educational foundations	6 s.h.
Theories of learning, child growth and development, and principles of guidance	7 s.h.
Methods and materials	3 s.h.
Student teaching	6 s.h.
Total	22 s.h.

Industrial Arts

Educational foundations	3 s.h.
Theories of learning, child growth and development and principles of guidance	7 s.h.
Methods and materials	7 s.h.
Student teaching	6 s.h.
Total	23 s.h.

Industrial Education

Educational foundations and philosophy	9 s.h.
Theories of learning, child growth and development, and principles of guidance	7 s.h.
Methods, curriculum and materials	12 s.h.
Student Teaching	6 s.h.
Total	34 s.h.

Mathematics Education

Educational foundations	4 s.h.
Theories of learning, child growth and development, and principles of guidance	7 s.h.
Methods and materials	5 s.h.
Student teaching	6 s.h.
Total	22 s.h.

Science Education

The professional education requirements are the same as those for mathematics education majors.

The program in Health and Physical Education

Educational foundations	4 s.h.
Theories of learning, child growth and development and principles of guidance	7 s.h.
Methods and materials	3 s.h.
Student teaching	6 s.h.
Total	20 s.h.

Each curriculum requires an introductory course in its area.

All curricula require Secondary Education, Principles of Guidance, Educational Psychology, a second course in Psychology (most frequently Psychology of Adolescence), Methods, and Student Teaching.

The following table shows more completely an analysis of information concerning professional education requirements.

PROFESSIONAL EDUCATION REQUIREMENTS OF MAJORS IN TEACHER EDUCATION

Course Areas	Required Sem. Hrs.	Curriculum I.A.Ed.	Ag.Ed.	I.Ed.	Ma.Ed.	Sc.Ed.
A. Social, Historical, Philosophical Foundations						
Secondary Education	2	X	X	X	X	X
Introd. to Subject or	1	X	X			
Introd. to Teaching	2			X	X	X
Planning Ed. Programs	3		X			
Vocational Education	2			X		
Hist. & Phil. of I.Ed.	3			X		
B. Psychological Foundations						
Educational Psychology	3	X	X	X	X	X
Industrial Psychology	3			X or		
Psychology of Adoles.	2	X	X	X	X	X
Principles of Guidance	2	X	X	X	X	X
C. Curriculum and Methods						
Methods of Teaching	3	X	X	X[1]	X	X
Teaching Materials	2	X		X	X	X
Curriculum Prob.	2	X				
Analysis of Tech. Ed. Prog. 2nd Course Content	3			X		
D. Student Teaching (90 clock hours minimum)	6	X	X	X	X	X

"1" Denotes 4 semester hour course

The guidelines for professional education in the respective fields are implemented in the following manner:

Agricultural Education

GUIDELINE 1: <u>The professional education program should provide an understanding of the normal sequences of human growth and development, with a special emphasis on the pupils of the school age to be taught</u>.

GUIDELINE 2: <u>The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning</u>.

PSY 304	Educational Psychology	3 s.h.
PSY 476	Psychology of Adolescence	2 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

ED 411	Student Teaching in Agriculture	6 s.h.
ED 412	Teaching Adults	3 s.h.
ED 413	Planning Education Programs	3 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

ED 102	Objectives of Agricultural Education	1 s.h.
ED 344	Secondary Education	2 s.h.
ED 413	Planning Educational Programs	3 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

Four courses are included in the full-time teaching experiences of students. Each of these courses provide students with opportunities to gain specialized learning experiences in the field.

ED 411	Student Teaching	6 s.h.
ED 412	Teaching Adults	3 s.h.
ED 413	Planning Educational Programs	3 s.h.

Industrial Arts Education

GUIDELINE 1: The professional education program should provide an understanding of the normal sequences of human growth and development, with special emphasis on the pupils of the school age to be taught.

GUIDELINE 2: The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning.

PSY 200	Introduction to Psychology	3 s.h.
PSY 304	Educational Psychology	3 s.h.
PSY 476	Psychology of Adolescence	2 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

The following courses are required of all students in Industrial Arts Education.

ED 422	Methods of Teaching Industrial Subjects	3 s.h.
ED 482	Curriculum Problems	2 s.h.
ED 483	Instructional Aids and Devices	2 s.h.
IA 304	General Shop Organization	2 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

Some emphasis is given to Guideline 4 and 5 in ED 422 referred to above, and major emphasis is given to them in the following required courses:

ED 344	Secondary Education	2 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

The following course in full-time off-campus student teaching is required of all students in Industrial Arts Education:

ED 444	Student Teaching in Industrial Subjects	6 s.h.

Industrial Education

GUIDELINE 1: The professional education program should provide an understanding of the normal sequences of human growth and development, with special emphasis on the pupils of the school age to be taught.

GUIDELINE 2: The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning.

PSY 476	Psychology of Adolescence	2 s.h.
PSY 304	Educational Psychology	3 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

ED 422	Methods of Teaching Industrial Subjects	4 s.h.
ED 483	Instructional Aids and Devices	2 s.h.
ED 305	Analysis of Technical Education Programs and Course Construction	3 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

ED 100	Introduction to Industrial Education	2 s.h.
ED 344	Secondary Education	3 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

ED 444	Student Teaching	6 s.h.

Science Education

GUIDELINE 1: The professional education program should provide an understanding of the normal sequences of human growth and development, with special emphasis on the pupils of the school age to be taught.

GUIDELINE 2: The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning.

PSY 304	Educational Psychology	3 s.h.
PSY 476	Psychology of Adolescence	2 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

ED 475	Methods of Teaching Science	3 s.h.
ED 477	Dev. & Selecting Teaching Materials in Science	2 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

ED 203	Introduction to Teaching	2 s.h.
ED 344	Secondary Education	2 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

ED 476	Student Teaching in Science	6 s.h.

Mathematics Education

GUIDELINE 1: The professional education program should provide an understanding of the normal sequences of human growth and development, with special emphasis on the pupils of the school age to be taught.

GUIDELINE 2: The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning.

PSY 304	Educational Psychology	3 s.h.
PSY 476	Psychology of Adolescence	2 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

ED 470	Methods of Teaching Mathematics	3 s.h.
ED 472	Dev. & Selecting Teaching Materials in Mathematics	2 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

ED 203	Introduction to Teaching	2 s.h.
ED 344	Secondary Education	2 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

ED 471	Student Teaching in Mathematics	6 s.h.

Physical Education and Health

GUIDELINE 1: The professional education program should provide an understanding of the normal sequences of human growth and development, with special emphasis on the pupils of the school age to be taught.

GUIDELINE 2: The professional education program should provide an understanding of the nature of learning, the learning process, and the psychology of learning.

PSY 304	Educational Psychology	3 s.h.
PSY 476	Psychology of Adolescence	2 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 3: The professional education program should provide an understanding of methods, special techniques, and materials appropriate to the specific levels or areas of the prospective teacher's subject-matter concentration, and skill in applying them in a classroom situation.

RPA 365	Methods & Materials in Health & Physical Education	3 s.h.
ED 420	Principles of Guidance	2 s.h.

GUIDELINE 4: The professional education program should provide an understanding of the purpose, organization, and administration of school systems, with special emphasis on the role of the school teacher in the total education program.

GUIDELINE 5: The professional education program should provide a broad historical, philosophical, and sociological orientation to schools in our society and to the profession of teaching.

ED 203	Introduction to Teaching	2 s.h.
ED 344	Secondary Education	2 s.h.

GUIDELINE 6: The professional education program should provide an extended period of continuous full-time student teaching experience in the grade levels or subjects to be taught.

RPA 480	Student Teaching in Physical Education	6 s.h.

STANDARD V--PROFESSIONAL LABORATORY EXPERIENCES

There is no one statement of purposes and objectives for professional laboratory experiences; however, the various departments within the School of Education understand the purposes of these valuable experiences and plan accordingly. The Departments of Industrial Education and Agricultural Education have written guides for their student teaching programs, and these guides adequately explain the purposes and objectives of the respective programs.

The organization for the administration and supervision of student teaching is provided through the chairmen of those departments having a program preparing students to teach. Individual departments make their own provisions for placement, supervision, and evaluation of student teachers.

A. Admission to Student Teaching

Criteria for admission to student teaching are:

(1) Grade point average of 2.0 or "C".

(2) Successful completion of requirements in sequence prior to student teaching.

B. Criteria for Co-operating Schools

The following criteria are used in the selection of schools for student teaching:

(1) Schools are accredited by the North Carolina Department of Public Instruction.

(2) The department of the co-operating school in which the student teacher will teach must be a superior one.

(3) Co-operating schools are well-organized and well-administered.

(4) A desire for student teachers is expressed by co-operating schools.

(5) Schools indicate that valuable learning experiences will be provided.

C. Criteria for the Supervising Teachers

Stated criteria for the selection of supervising teachers are:

(1) The teacher is a successful teacher.

(2) A supervising teacher has three years' teaching experience, and it is preferred that the teacher hold a master's degree.

(3) Supervising teachers want to work with student teachers.

(4) Teachers indicate to college personnel that efforts will be made to provide an effective experience for the student teacher.

D. Co-ordination with Co-operating School Personnel

Responsibility for assignment and supervision of student teachers resides with the heads of departments and contacts are made with principals and superintendents to place student teachers through the departments. College supervisors are responsible for co-ordination of student teaching activities. Co-ordination is effected through:

(1) Visitation of college supervisors--a minimum of three visits.

(2) Observation of student teachers.

(3) Conferences with student teachers, supervising teachers, and principals.

(4) Periodic workshops on campus for supervising teachers.

As there is no laboratory school located on campus, student teachers must be placed in schools off the campus. It is common procedure in agricultural education and industrial arts education to place two student teachers with one supervising teacher; whereas in mathematics and science education only one student is placed with one teacher. Student teaching takes place only during the fall semester. There were 78 student teachers during the fall semester, 1963-64. Twenty-eight were in agricultural education, 7 in industrial arts education, and 43 in mathematics and science education. Faculty members responsible for supervision included five members in agricultural education, five in industrial arts education, and three in mathematics and science education.

E. Evaluation of Student Teaching

College supervisors, supervising teachers, and the principals of the co-operating schools are involved in evaluating the performance of the student

teachers and the program itself. Each department has prepared a rating scale by which the effectiveness of the student teacher is measured by the supervising teacher and the college supervisor. Self-evaluations are encouraged by college supervisors.

STANDARD VI--FACILITIES, EQUIPMENT, AND MATERIALS

The Division of Teacher Education and the Department of Psychology are housed in Tompkins Hall. This building has approximately 54,000 square feet of floor space, and, although it is old, has been recently renovated.

A. Building Facilities and Equipment

1. Housing and offices for faculty

Faculty offices are grouped by departments. The accepted policy is to provide single occupancy for associate professors and professors. Of 22 faculty members, 17 have individual offices, 2 have partitioned office areas, and 3 share offices with another person.

Secretarial personnel are housed in the office area of the departments they serve and normally look to this staff for assignments. However, the working policy of the secretarial staff permits redistribution of the work among the total staff during emergency periods of overload in any one department.

All offices have the usual equipment of desk, swivel chair, visitors' chairs, steel files, electric fan, and small tables as needed. Dictating machines, typewriters, and calculators are available to all faculty members.

The first floor of Tompkins Hall houses the offices of the Departments of Agricultural Education, Mathematics and Science Education, Industrial Education, Industrial Arts, the Dean of the School of Education, and the Professor of Research. The faculty offices for the Departments of Psychology and Occupational Information and Guidance are on the second floor of Tompkins Hall.

The faculty and staff lounge is centrally located on the first floor adjacent to the front entrance hall.

2. Classrooms and equipment

The Department of Industrial Arts occupies the ground floor of Tompkins Hall. This area contains 24 units including 2 classrooms, 10 laboratories, supply rooms, offices, service rooms, and 1 seminar room.

The total value of the equipment in the Industrial Arts Department is approximately $85,000. The basic equipment for student work in woods, metals, graphic arts, and drafting was installed in 1940. A special appropriation of $25,000 in 1950 for the purchase of new and modern equipment made possible the addition of courses in electricity and electronics. Further development is underway as a result of a second special appropriation of $30,000 in 1961. The latter money is to provide further modernizing of the laboratory equipment and establish an experimental laboratory for research, independent study, and creative work by students and faculty.

Three classrooms are located on the first floor. The largest room accommodates 70 students while the other two rooms are suitable for about 40 students each. The large classroom contains conference-type tables and individual chair-desks. The other two rooms have chair-desks for students. All rooms have chalk boards and bulletin boards. Two rooms are equipped with blackout curtains. One room on this floor is a student loungs with tables, chairs, and lounge furniture. Also located on this floor are the duplicating facilities. Electric equipment is used for duplicating from stencils or by the "spirit duplicating" process. There is a sink, running water, and storage facilities in the duplicating room.

There are six classrooms on the second floor. Two are equipped for projection. All classrooms have movable furniture and a capacity of 35 to 50 students. All classrooms have adequate lighting, blackboard space, and wall display area. One classroom, however, is in the process of being diverted to research purposes.

B. Special Facilities

The School has a large room, 33 x 24 feet, set aside and equipped for the purpose of handling the program in remedial reading. The room is well lighted and is equipped with the latest model perceptoscope, audiometer, Telebinocular, individual reading trainers, and a selected stock of paper and pencil reading and vocabulary tests. A screen is provided for use with the Perceptoscope and movie projectors and the room is equipped with blackout curtains.

The Department of Industrial Arts has a small seminar room seating nine persons. A larger seminar room accomodates twenty students and contains books and periodicals. There is also an electrical laboratory divided in such a way as to make possible its use both as a laboratory and classroom. A total of 30 students can be seated in this section of the electrical laboratory. Special testing and demonstration apparatus are arranged for use in the special instructional part of the laboratory.

The Industrial Arts Department has an experimental laboratory, equipped with specialized machines and testing devices, used by students and faculty members to conduct independent studies and experiments.

On the second floor there is a special study and demonstration laboratory equipped with a one-way vision screen, tape recorder, and one-way speaker system. This room is a research facility for studying group behavior and counseling and is available for observation of testing and interviewing. It was designed to better serve students at the graduate level for Laboratory and Practicum.

The Department of Occupational Information and Guidance has an occupational research laboratory equipped with bound complete volumes of the Personnel and Guidance Journal. The Journal of Counseling Psychology, All Buros Mental Measurement Yearbooks, and Government and State Publications. There are two 4-drawer files of specimen sets of all types of tests needed for the training of school counselors. It is open to graduate students and faculty.

Adjacent to the occupational information laboratory is a large seminar room capable of seating 22 people. There are also three individual counseling rooms for private sessions between the client and counselor-trainee.

Several division-wide facilities in the category of research and special projects are grouped under the heading of psychology laboratories. They include a shop and storage room, a teaching laboratory, a seminar and laboratory room, a laboratory for research on testing, and three special research rooms. Several

types of psychological tests are available in the laboratory for research on testing for graduate students in guidance and psychology and occasionally for other students enrolled in a graduate course in tests and measurements.

The College also supports an Institute of Statistics which has modern computers. Use of these facilities is open to graduate students and faculty at relatively small cost. The Institute furnishes at nominal cost technical assistance in programming and statistical analysis of data. The College also furnishes cars which may be used in making field studies and surveys.

Other special facilities include exhibit cases and bulletin boards located on each corridor, dark room facilities located on the ground floor and the first floor, and seminar rooms available for the Department of Industrial Education, the Mathematics and Science Department, and the Department of Agricultural Education.

C. Library Resources

Most library resources for professional education are located in the D. H. Hill Library which serves all schools at the college. There are approximately 275,000 books housed in the library, of which more than 7,000 books are classified as professional education. Appropriate reference and research resources are available including approximately 120 selected journals in the field of education.

In addition, each department has supplementary library materials and books in the area of specialization located in the departmental offices. The office of the Dean of the School of Education contains a library of more than 300 books in the field of education.

The budget of the main library for 1962-63 was $172,883. Of this amount $43,000 was allocated to the eight schools to purchase books. The School of Education received $4,000. The other schools received the following amounts: Agriculture, $9,000; Design, $3,500; Engineering, $6,000; Forestry, $1,000; General Studies, $9,000; Physical Science and Applied Mathematics, $9,000; and Textiles, $1,500.00.

The allocated funds for the School of Education are made available on a first-come first-served basis. This can result in an imbalance in expenditures by departments. In 1961-62, for example, two-thirds of the allocated funds were spent for books for the Department of Psychology.

The School of Education has a representative on the College Library Committee. This enables the staff of the School of Education to be informed relative to the library policies and holdings.

D. Curriculum Laboratory

The School of Education has no centralized curriculum laboratory. Some of the resources usually found in a central curriculum laboratory are available in the supplementary library materials located in the departmental offices and in the special reading and seminar rooms.

The Department of Industrial Education has a special reading, conference, and seminar room open to use by students and faculty of the School of Education. The room will seat twelve people and is equipped with suitable furniture and collections of books and professional journals dealing with industrial education.

The Mathematics and Science Department has a reading and seminar room equipped with professional library books, high school textbooks in mathematics and science, professional journals which supplement the holdings in the main library, and curriculum material in mathematics and science. A special effort is made to provide material relating to the most recent developments in mathematics and science curricula on the high school level.

The Department of Agricultural Education has a special reading and seminar room open to undergraduate and graduate students and faculty. Materials which will be used often by the graduate students and such items as may be needed to supplement the holdings of the main library, are kept in this room. There is a collection of theses, Summaries of Studies in Agricultural Education, and journals likely to be used often for current reading, such as the American Vocational Journal and the Agricultural Education Magazine. The Department supports a

graduate assistant to assist students and faculty members in finding library materials needed in connection with research projects.

The Department of OIG has a special reading and seminar room open to graduate students and faculty. This is a supplement to the main library. There is a collection of theses, professional journals, pamphlets, complete occupational information files and test files.

E. Audiovisual Facilities and Materials

Most types of audiovisual equipment and materials including sound film projectors, filmstrip projectors, overhead projectors, cameras, dictaphones, screens, carts, chart boards, films, filmstrips, and numerous miscellaneous items are available. Some of the machines, equipment, and supplies are housed in a small storeroom on the first floor and are checked out by a secretary. Other aids are located in the departments. In addition, a central all-college agency provides audiovisual aids and services. Several rooms have blackout curtains and are used for audiovisual purposes.

There are several types of special equipment available, such as an audiometer, a sight screener, telebinocular, an onthorator, a perceptoscope, calculators, audio-files, etc. Funds are made available to purchase special equipment. For example, in 1961-62, $8,200 was spent.

Interviews with faculty members from the various departments revealed that accessibility to and use of audiovisual aids varies from department to department with some aids accessible only to one department.

F. Contemplated Changes

A new School of Education building will be included in the capital improvement request for the 1965-67 biennium. The new building will include 87,915 square feet and cost about $2,000,000. A central location south of the campus atomic reactor plant has been designated for this building. All departments of the School of Education except the Department of Psychology will be housed in the new building.

GRADUATE

STANDARD I--OVER-ALL POLICIES

A. Purposes and Objectives

The graduate program at North Carolina State was restricted to agricultural education, industrial arts education, industrial education, and guidance at the formation of the Consolidated University in 1931. A master's degree program in psychology was initiated in 1949. A master's degree program for teachers majoring in mathematics education and science education was approved in 1964.

The assumptions and objectives on which the undergraduate program are projected serve the same purpose for the graduate program.

Several means are used to evaluate the effectiveness of the graduate program in teacher education. Departmental advisory councils, inter-departmental committees, the Council on Teacher Education, the School Graduate Committee, and the School Curriculum Committee have been involved in appraising the graduate program and recommending improvements.

B. Organization and Administration

The Graduate School of the Consolidated University of North Carolina is composed of the Graduate Schools at North Carolina State, the University of North Carolina at Greensboro, and the University of North Carolina at Chapel Hill. The Graduate School at each institution is administered by a graduate dean who works in close association with the Vice-President for Graduate Studies and Research.

The authority to pass on new graduate programs and to establish over-all policy is vested in the Graduate Executive Council. Its chairman is the Vice-President for Graduate Studies and Research. This Committee meets three times a year.

The Administrative Board of the Graduate School of North Carolina State is the policy making body for graduate study. It is made up of 10 members, plus the Dean of the Graduate School. Seven members represent the Schools of Agriculture, Education, Engineering, Foresty, General Studies, Physical Sciences and Applied Mathematics, and Textiles and are elected by the respective faculties. Three

additional members are appointed by the Chancellor on the recommendation of the Dean of the Graduate School.

The functions of the Administrative Board are to establish graduate policies for the College and to act in an advisory capacity to the Dean of the Graduate School. The Board acts upon all graduate courses and new graduate degree programs and on all appointments to the Graduate Faculty. It is responsible for the allocation of money from the Cost of Education Fund for improvement of graduate instruction. The Board establishes policies regarding admission, course loads, scholarship requirements, specific degree requirements, and foreign language and thesis requirements. Exceptions to these policies are considered by the Administrative Board.

STANDARD II--STUDENT PERSONNEL PROGRAMS AND SERVICES

A. Admission Procedures

Admission to Graduate School may be to full graduate standing, provisional status, or unclassified status. For admission to full graduate standing, a student must have a bachelor's degree from a recognized college or university regarded as standard by a regional or general accrediting agency and at least a "B" grade average in his undergraduate major. Provisional admission may be granted to applicants (1) who lack undergraduate work considered essential for graduate study in the major fields, (2) from nonaccredited institutions,and (3) whose scholastic records are below the standards for admission to full graduate standing when unavoidable extenuating circumstances affected their undergraduate averages or when progressive improvements in their undergraduate programs warrant provisional admission. Unclassified status is for graduate students who are not candidates for graduate degrees. They may take courses for graduate credit, but may not apply more than ten credits earned while in the unclassified status to any program leading to an advanced degree at this institution.

A committee or individual from each department evaluates the application of each candidate and makes recommendations to the Dean of the Graduate School. The application includes such information as scientific and honorary organizations, academic honors received, papers published, confidential letters from at least three persons who know the applicant's academic record and qualifications for graduate study, and other work experience.

In general, the various departments do not require standardized tests for admission. One exception that was found by the committee was the Department of Psychology which requires the Graduate Record Examination and recommends the Miller Analogies Test.

Teaching experience is not required for admission nor completion of a graduate program.

The entry point to a given graduate program is admission to the Graduate School

of North Carolina State.

An application for admission to candidacy for the master's degree must be filed before the end of the first week of the last semester in residence. Acceptance for candidacy signifies that the student is an official candidate for a master's degree.

B. Transfer Policies

A student may enroll in the Graduate School to pursue a major that is different from his undergraduate major, e.g., an industrial arts undergraduate may pursue a master's degree program in industrial education or an agricultural education undergraduate major may pursue a master's degree program in science education. However, few if any students have ever transferred from one major to another after initial enrollment in the Graduate School. In the event such a transfer is requested, the student would be referred to the head of the department to which he desires to transfer. After ascertaining the adequacy of the student's preparation for entering the new program, the department head recommends the acceptance of the student to the Dean of the Graduate School. A curriculum change card signed by the department head and the Dean of the Graduate School is processed to indicate that approval has been given for the transfer.

C. Standards for Retention and Completion of a Program

An average of "B" must be attained on all course work taken as a part of the student's graduate program. Failure to maintain a "B" average in any term will place the student on probation. Any student whose academic record fails to meet the "B" average requirement for two consecutive terms will not be permitted to continue a graduate program without the written approval of the Dean. A minimum grade of "C" must be made on all formal course work to obtain graduate credit. However, there appears to be no established policies for elimination of students for nonacademic reasons.

The satisfactory completion of a minimum of 30 semester hours of a graduate program approved by the student's advisory committee with an over-all academic average of "B" or higher and the submission of an acceptable research report

or thesis will qualify the student for the master's degree.

D. Advising Prior to Selection of Curricula

Graduate students are admitted to a given department and thus to its curricula. Prior to enrollment, all students admitted to the graduate program have an interview with faculty members.

E. Program Completions

During the 1961-62 academic year and the 1962 summer session, 22 students completed the requirements for Master of Science and Master of Education degrees. Six received Master of Education degrees with majors in Agricultural Education, eight with majors in industrial arts and three with majors in guidance. Four students received Master of Science degrees with majors in guidance and one in industrial arts.

F. Records

Student records are kept in the office of the head of the department in which the student is majoring, the Graduate School Office, and the Office of Admissions and Registration. Included in the files of each graduate student are the application for admission, transcript of undergraduate credit, plan of graduate work, rosters and grade reports.

G. Residence Requirements

Students engaged in a course of study leading to the master's degree are required to be in residence at the College pursuing graduate work the equivalent of one full academic year.

H. Transfer and Extension Credit

No more than six of the academic credits required for the degree will be accepted from other institutions. No graduate credit is allowed for courses taken by correspondence. A maximum of six semester credits may be obtained in extension study in the field of education provided the extension courses are taught by members of the graduate faculty and provided the courses are given graduate rank. Courses taken by extension are accepted for graduate credit

only when the student has been admitted to the Graduate School and when notice of registration has been filed with the Graduate School. Credit earned in extension courses reduces the amount of credit that may be transferred from other institutions by the amount of graduate credit earned.

I. Time Limit of Programs

All requirements for the degree including the thesis or research problem must be completed within six years following initial enrollment in the Graduate School.

J. Student Course Load

The maximum course load for graduate students is 15 semester hours. There is no provision for limiting full-time in-service professional school personnel to one course per semester. However, students are advised to take only one course per semester.

K. Recommendation Procedure

The head of the department of teacher education in which a student majors is technically responsible for recommending the graduates for certification.

STANDARD III--FACULTY

Fourteen of the faculty members of the School of Education are members of the graduate faculty. All have earned doctorates and are listed by rank as follows:

Rank	Number
Assistant Professor	1
Associate Professor	6
Professor	7

According to the NCATE report, records in the office of the Dean of the School of Education, and records in the office of the Dean of the Graduate School, each graduate faculty member is teaching in his field of specialization. Except for mathematics education, as of April 1, 1964, there will be at least two professors for each program on the master's level.

Extension teaching and thesis supervision are considered in the total faculty load. The graduate program is relatively small and has not reached such proportion that teaching loads can always be progressively lowered as instruction becomes specialized.

Salary schedules for the graduate faculty are the same for all schools and departments.

The report on undergraduate faculty contains information concerning the program of faculty improvement and professional advancement for both undergraduate and graduate faculty.

STANDARD IV--CURRICULA

The graduate program at North Carolina State is restricted to programs for secondary teachers majoring in agricultural education, industrial education, industrial arts education, mathematics education, and science education.

These departments offer programs leading to the Master of Science and Master of Education degrees.

The Department of Occupational Information and Guidance offers programs of study leading to the Master of Science and Master of Education degrees.

The Department of Psychology offers programs of study leading to the Master of Science degree. The following tables show the enrollment of each graduate program.

TABLE 5

NUMBER OF STUDENTS ENROLLED IN EACH TEACHER EDUCATION CURRICULUM
FALL SEMESTER, 1963-64

AREA	Number (M.S. and M.Ed.)
Agricultural Education	37
Industrial Arts Education	9
Industrial Education	12
Mathematics Education	-
Occupational Information and Guidance	43
Psychology	4
Science Education	-

NUMBER OF STUDENTS COMPLETING EACH TEACHER EDUCATION CURRICULUM
1962-63, INCLUDING 1963 SUMMER SESSION

AREA	M.S.	M.Ed.	TOTAL
Agricultural Education	0	2	2
Industrial Arts Education	1	1	2
Industrial Education	1	0	1
Occupational Information and Guidance	3	4	7
Psychology	1	0	1
TOTAL	6	7	13

A. Programs for Teachers

All master's degree programs at North Carolina State require a minimum of 30 semester hours, with some departments requiring additional hours.

Each graduate student working toward the master's degree has an individual program of graduate studies designed to meet his specific needs. However, there is much similarity in the program. Education 615, Introduction to Educational Research, is a common requirement for all majors. Courses in educational philosophy, administration, and seminars are part of the program for most graduate students majoring in agricultural education, industrial arts, and industrial education. In addition to these formal courses, the students enroll in research courses for a maximum of six semester hours for work on their required thesis or research problems. All teachers include 12 to 18 semester hours of course work in their subject matter area.

The following analysis by guidelines shows how the institution purports to meet the guidelines.

1. Majors in Agricultural Education

GUIDELINE 1: The program should broaden the understanding of the learner and the learning process.

Courses related to this guideline are open to graduate students in agricultural education, but none are required. Most students are encouraged to include two or more courses in Rural Sociology in their programs of work. All students are required to include a minimum of 15 semester hours in Guidelines 1, 2, and/or 3.

Some of the courses offered are:

ED 563	Effective Teaching	3 s.h.
ED 524	Occupational Information	3 s.h.
PSY 504	Advanced Educational Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
PSY 610	Theories of Learning	3 s.h.

GUIDELINE 2: The program should assist the teacher in gaining greater insights and skills in the use of the techniques of research and in designing and carrying out research projects.

Six semester hours of credit are required in the area of research for all

graduate students in agricultural education.

Some of the courses offered are:

ED 558	Special Problems in Teaching		3 s.h.
ED 615	Introduction to Educational Research		3 s.h.
ED 699	Research	Maximum	6 s.h.

GUIDELINE 3: The program should extend the teacher's understanding of the basic educational philosophies and school curriculum patterns.

Students may select courses from the offerings below. Most students include ED 554, ED 568, and ED 617 in their programs of work. However, none of the courses are required of all graduate students.

Some of the courses offered are:

ED 554	Planning Programs in Agricultural Education		3 s.h.
ED 568	Adult Education in Agriculture		3 s.h.
ED 616	Advanced Problems in Teaching		3 s.h.
ED 617	Philosophy of Agricultural Education		3 s.h.
ED 664	Supervision in Agricultural Education		3 s.h.
ED 665	Supervising Student Teaching		3 s.h.
ED 694	Seminar in Agricultural Education	Maximum	3 s.h.

GUIDELINE 4: The program should provide for concentrated study in the teacher's subject field or fields.

Courses in technical agriculture are designed to give graduate students an opportunity to study in depth in selected fields of agriculture. Students select courses from the several fields depending on their individual needs and preferences.

All graduate students are required to enroll for a minimum of 18 hours in the School of Agriculture. Moreover, the program of work for each student must include one area of nine semester hours or two areas of six hours each.

Students are encouraged to select Rural Sociology for one of these areas of concentration.

The course descriptions listed below are only examples of those courses which graduate students majoring in agricultural education usually take. However, they are courses which are usually taken by graduate students in this curriculum.

Some of the courses offered are:

Agricultural Economics:

AGC 413	Farm Appraisal and Finance	3 s.h.
AGC 431	Agricultural Price Analysis	3 s.h.
AGC 521	Procurement, Processing, and Distribution of Agricultural Products	3 s.h.
AGC 523	Planning Farm and Area Adjustments	3 s.h.
AGC 533	Agricultural Policy	3 s.h.

Agricultural Engineering:

AGE 411	Farm Power and Machinery II B	3 s.h.

Crop Science:

CS 511	Tobacco Technology	3 s.h.

Horticultural Science:

HS 411	Nursery Management	3 s.h.
HS 432	Vegetable Production	3 s.h.

Rural Sociology:

RS 513	Community Organization	3 s.h.
RS 541	Social Agencies and Programs	3 s.h.
RS 633	The Rural Community	3 s.h.

2. Majors in Industrial Arts Education

GUIDELINE 1: The program should broaden the understanding of the learner and the learning process.

Most of the graduate students in industrial arts select courses either in psychology or guidance as their minor field.

Some of the courses offered are:

PSY 504	Advanced Educational Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
PSY 550	Mental Hygiene in Teaching	3 s.h.
PSY 576	Developmental Psychology	3 s.h.
ED 524	Occupational Information	3 s.h.
ED 631	Educational and Vocational Guidance	3 s.h.
ED 633	Techniques of Counseling	3 s.h.

GUIDELINE 2: The program should assist the teacher in gaining greater insights and skills in the use of the techniques of research and in designing and carrying out research projects.

Seven semester hours of credit are required in the area of research.

Some of the courses offered are:

ED 615	Introduction to Educational Research		3 s.h.
ED 699	Research	Maximum	6 s.h.
IA 592	Special Problems in Industrial Arts	Maximum	6 s.h.

GUIDELINE 3: The program should extend the teacher's understanding of the basic educational philosophies and school curriculum patterns.

Some of the courses offered are:

ED 630	Philosophy of Industrial Arts Education	2 s.h.

Required of all graduate students in industrial arts education.

ED 635	Administration and Supervision of Industrial Arts		2 s.h.
ED 692	Seminar in Industrial Arts Education	Maximum	2 s.h.
IA 560	New Developments in Industrial Arts Education		3 s.h.

GUIDELINE 4: The program should provide for concentrated study in the teacher's subject field or fields.

Some of the courses offered are:

ED 552	Industrial Arts in the Elementary School	3 s.h.
IA 510	Design for Industrial Arts Teachers	3 s.h.
IA 570	Laboratory Problems in Industrial Arts	Maximum 6 s.h.
IA 592	Special Problems in Industrial Arts	Maximum 6 s.h.
IA 595 (ED 595)	Industrial Arts Workshop	3 s.h.

3. Majors in Industrial Education

GUIDELINE 1: The program should broaden the understanding of the learner and the learning process.

Some of the courses offered are:

ED 563	Effective Teaching	3 s.h.
PSY 504	Advanced Educational Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
ST 421, 422	Introduction to Mathematical Statistics	3 s.h.
ST 513	Experimental Statistics for Social Sciences I	3 s.h.
ST 514	Experimental Statistics for Social Sciences II	3 s.h.

GUIDELINE 2: The program should assist the teacher in gaining greater insights and skills in the use of the techniques of research and in designing and carrying out research projects.

Some of the courses offered are:

ED 591	Special Problems in Industrial Education	Maximum 6 s.h.
ED 615	Introduction to Educational Research	3 s.h.
ED 699	Research	Maximum 6 s.h.

GUIDELINE 3: The program should extend the teacher's understanding of the basic educational philosophies and school curriculum patterns.

Some of the courses offered are:

EE 506	Dynamical Analogies	3 s.h.
EE 507	Electromagnetics	3 s.h.
EE 512	Communication Theory	3 s.h.
EE 516	Feedback Control Systems	3 s.h.
EE 517	Control Laboratory	1 s.h.
EE 520	Fundamentals of Logic Systems	3 s.h.

4. Majors in Mathematics and Science Education

GUIDELINE 1: The program should broaden the understanding of the learner and the learning process.

Each student will take at least one course in this area and additional courses as deemed necessary by his depth of preparation.

Some of the courses offered are:

PSY 504	Advanced Educational Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
PSY 576	Developmental Psychology	3 s.h.
PSY 578	Individual Differences	3 s.h.
PSY 606	Behavior Theory	3 s.h.

GUIDELINE 2: The program should assist the teacher in gaining greater insights and skills in the use of the techniques of research and in designing and carrying out research projects.

A minimum of six semester hours is required in the area of research.

Some of the courses offered are:

ED 615	Introduction to Educational Research	3 s.h.
ED 596, 597	Special Problems	3 s.h.
PSY 501	Experimental Psychology	3 s.h.
ED 699	Research Maximum	6 s.h.

GUIDELINE 3: The program should extend the teacher's understanding of the basic educational philosophies and school curriculum patterns.

Some of the courses offered are:

ED 614	Modern Principles and Practices in Secondary Educ.	3 s.h.

ED 516	Community Occupational Surveys	2 s.h.
ED 520	Personnel and Guidance Services	3 s.h.
ED 521	Organization of Related Study Materials	3 s.h.
ED 524	Occupational Information	3 s.h.
ED 525	Trade Analysis and Course Construction	3 s.h.
ED 527	Philosophy of Industrial and Technical Education	3 s.h.
ED 528	Principles and Practices in Industrial Cooperative Training	3 s.h.
ED 529	Curriculum Materials Development	3 s.h.
ED 530	Group Guidance	3 s.h.
ED 533	Organization and Administration of Guidance Services	3 s.h.
ED 568	Adult Education in Agriculture	3 s.h.
ED 590	Individual Problems in Guidance	Maximum 6 s.h.
ED 609	Planning and Organizing Technical Education Programs	3 s.h.
ED 610	Administration and Supervision of Vocational Education	3 s.h.
ED 691	Seminar in Industrial Education	Maximum 3 s.h.
RS 513	Community Organization	3 s.h.

GUIDELINE 4: <u>The program should provide for concentrated study in the teacher's subject field or fields</u>.

In the area of specialization in subject matter of field of work, the graduate plan of work for industrial education teachers is developed according to the needs of each individual. Teachers of trade and technical education generally select courses from departments within the School of Engineering. The following are some of the courses offered for a teacher of electronics in order to develop depth in his specialty.

EE 503	Linear Network Theory	3 s.h.

EE 506	Dynamical Analogies	3 s.h.
EE 507	Electromagnetics	3 s.h.
EE 512	Communication Theory	3 s.h.
EE 516	Feedback Control Systems	3 s.h.
EE 517	Control Laboratory	1 s.h.
EE 520	Fundamentals of Logic Systems	3 s.h.

4. Majors in Mathematics and Science Education

GUIDELINE 1: The program should broaden the understanding of the learner and the learning process.

Each student will take at least one course in this area and additional courses as deemed necessary by his depth of preparation.

Some of the courses offered are:

PSY 504	Advanced Educational Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
PSY 576	Developmental Psychology	3 s.h.
PSY 578	Individual Differences	3 s.h.
PSY 606	Behavior Theory	3 s.h.

GUIDELINE 2: The program should assist the teacher in gaining greater insights and skills in the use of the techniques of research and in designing and carrying out research projects.

A minimum of six semester hours is required in the area of research.

Some of the courses offered are:

ED 615	Introduction to Educational Research	3 s.h.
ED 596, 597	Special Problems	3 s.h.
PSY 501	Experimental Psychology	3 s.h.
ED 699	Research	Maximum 6 s.h.

GUIDELINE 3: The program should extend the teacher's understanding of the basic educational philosophies and school curriculum patterns.

Some of the courses offered are:

ED 614	Modern Principles and Practices in Sec. Ed.	3 s.h.

ED 665	Supervising Student Teachers	3 s.h.
ED 695	Seminar in Science or Mathematics Teaching	Maximum 2 s.h.

GUIDELINE 4: The program should provide for concentrated study in the teacher's subject field or fields.

Approximately 21 to 24 semester hours will be selected in the area of subject specialization and 12 to 15 semester hours in professional education including research credit. A minimum of 36 semester hours is required.

A wide range of courses are now being offered. The following is a sampling which gives an indication of the quality and quantity of available courses.

Biological Science:

BO 421	Plant Physiology	4 s.h.
BO 511	Advanced Bacteriology	3 s.h.
BO 545	Advanced Plant Ecology	3 s.h.
GN 411	The Principles of Genetics	3 s.h.
GN 540	Evolution	3 s.h.
ZO 522	Animal Ecology	3 s.h.
ZO 614	Cell Physiology	3 s.h.

Physical Science:

CH 411	Analytical Chemistry I	4 s.h.
CH 431	Physical Chemistry I	3 s.h.
CH 551	General Biological Chemistry	5 s.h.
PY 401	Mechanics	4 s.h.
PY 407	Introduction to Modern Physics	3 s.h.
MIG 452	Exogenic Materials and Processes	4 s.h.
MIG 581	Geomorphology	3 s.h.
PHI 405	Foundations of Science	3 s.h.

Mathematics:

MA 401	Intermediate Differential Equations	3 s.h.

MA 403	Fundamental Concepts of Algebra	3 s.h.
MA 421	Theory of Probability I	3 s.h.
MA 527	Numerical Analysis I	3 s.h.
MA 622	Vector Spaces and Matrices	3 s.h.
ST 513	Experimental Statistics for Social Sciences I	3 s.h.

B. Program in Occupational Information and Guidance

This program includes a total of 39 s.h. from the following listed courses. Only Education 615 is required.

GUIDELINE 1: The program should provide a thorough understanding of the individual, including the dynamics of human behavior and group processes.

Selections from the following:

PSY 578	Individual Differences	3 s.h.
PSY 576	Developmental Psychology	3 s.h.
PSY 570	Theories of Personality	3 s.h.
ED 530	Group Guidance	3 s.h.
PSY 530	Abnormal Psychology	3 s.h.
PSY 550	Mental Hygiene in Teaching	3 s.h.

GUIDELINE 2: The program should provide professional competencies directly related to the practice of school counseling.

Selections from the following:

ED 520	Personnel and Guidance Services	3 s.h.
ED 524	Occupational Information	3 s.h.
ED 631	Educational and Vocational Guidance	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
PSY 571	Individual Intelligence Measurement	3 s.h.
ED 590	Individual Problems and Guidance Maximum	6 s.h.
ED 633	Techniques of Counseling	3 s.h.

GUIDELINE 3: The program should extend the understanding of the basic educational philosophies and school curriculum patterns.

ED 614	Modern Principles and Practices in Secondary Education	2 s.h.
ED 616	Advanced Problems in Teaching	3 s.h.

GUIDELINE 4: The program should provide complete information regarding the philosophy, organization, and administrative relationships of the guidance services.

ED 533	Organization and Administration of Guidance Services	3 s.h.
ED 520	Personnel and Guidance Services	3 s.h.

GUIDELINE 5: The program should include a study of societal forces and cultural changes in the graduate areas of sociology, anthropology, economics, and international relations.

SOC 401	Human Relations in Industrial Society	3 s.h.
SOC 411	Community Relationships	3 s.h.
SOC 414	Social Structure	3 s.h.
SOC 501	Leadership	3 s.h.
SOC 502	Society, Culture, and Personality	3 s.h.
SOC 510	Industrial Sociology	3 s.h.
EC 425	Industrial Management	3 s.h.
EC 426	Personnel Management	3 s.h.
EC 431	Labor Problems	3 s.h.
EC 432	Industrial Relations	3 s.h.
PS 431	International Organization	3 s.h.
PS 502	Public Administration	3 s.h.
RS 513	Community Organization	3 s.h.
UNC SOC 122	Cultural Anthropology	3 s.h.
UNC ANTHRO 121	Culture and Personality	3 s.h.

GUIDELINE 6: The program should include an emphasis on research and statistics.

ED 615	Introduction to Research	3 s.h.
ED 651	Thesis	3 s.h.

GUIDELINE 7: The program should provide laboratory and practicum experiences in counseling.

ED 641	Laboratory and Practicum Experience in Counseling	3 s.h.

C. Program for Majors in Psychology.

This program is related to the guidelines in the following manner. Required courses are marked by an asterisk.

GUIDELINE 1: The program should provide a broad understanding of the psychology of learning and the learning difficulties of children.

*PSY 504	Advanced Educational Psychology	3 s.h.
*PSY 576	Developmental Psychology	3 s.h.
PSY 578	Individual Differences	3 s.h.
PSY 610	Theories of Learning (May be substituted for PSY 504)	3 s.h.

GUIDELINE 2: The program should provide a thorough training in the techniques of measurement and evaluation.

PSY 535	Tests and Measurements	3 s.h.
PSY 570	Theories of Personality (Required)	3 s.h.
*PSY 591	Individual Intelligence Measurement	3 s.h.
*PSY 635	Psychological Measurement	3 s.h.
*PSY 692	Personality Measurement	3 s.h.
*PSY 693	Psychological Clinic Practicum	3 to 13 s.h.
*ST 513	Experimental Statistics for Social Sciences I	3 s.h.
ST 514	Experimental Statistics for Social Sciences II	3 s.h.

GUIDELINE 3: The program should provide a comprehensive understanding of personality development and the dynamics of human behavior.

ED 633	Techniques of Counseling	3 s.h.
PSY 511	Advanced Social Psychology (Required)	3 s.h.
PSY 530	Abnormal Psychology	3 s.h.
*PSY 570	Theories of Personality	3 s.h.
*PSY 576	Developmental Psychology	3 s.h.

GUIDELINE 4: The program should provide an emphasis on research and appropriate statistical techniques.

*PSY 501	Experimental Psychology	3 s.h.
*PSY 514	Psychological Research Design	1 s.h.
PSY 604	Advanced Experimental Psychology: Learning and Motivation	3 s.h.
*PSY 635	Psychological Measurement	3 s.h.
*ST 513	Experimental Statistics for Social Sciences I	3 s.h.
ST 514	Experimental Statistics for Social Sciences II	3 s.h.

GUIDELINE 5: The program should provide a basic understanding of the organization and operation of public schools, and appropriate knowledge of curriculum development.

*ED 501	Education of Exceptional Children	3 s.h.
ED 502	Analysis of Reading Abilities	3 s.h.
ED 503	Improvement of Reading Abilities	3 s.h.
ED 614	Modern Principles and Practices in Secondary Education	2 s.h.
ED 617	Philosophy of Agricultural Education	3 s.h.
ED 630	Philosophy of Industrial Arts	2 s.h.
ED 633	Techniques of Counseling	3 s.h.
*PSY 693	Psychological Clinic Practicum	6 to 12 s.h.

D. Typical Programs.

Typical programs of candidates for the Master of Education degree include the

following:

Agricultural Education

AGC 523	Planning Farm and Area Adj.	3 s.h.
AGC 551	Agricultural Production Economics	3 s.h.
ED 554	Planning Programs of Vo-Ag.	3 s.h.
ED 563	Effective Teaching	3 s.h.
ED 568	Adult Education in Agriculture	3 s.h.
ED 593	Special Problems	3 s.h.
ED 615	Introduction to Educational Research	3 s.h.
ED 617	Philosophy of Agricultural Education	3 s.h.
ED 699	Research	3 s.h.
RS 513	Community Organization	3 s.h.
RS 633	The Rural Community	3 s.h.
	Total	33 s.h.

Industrial Arts Education

ED 615	Introduction to Educational Research	3 s.h.
ED 630	Philosophy of Industrial Arts	2 s.h.
ED 635	Admin. and Supervision of Industrial Arts	2 s.h.
ED 692	Seminar in Industrial Arts	2 s.h.
ED 699	Research	6 s.h.
IA 570	Lab. Problems in Industrial Arts	6 s.h.
IA 592	Special Problems in Industrial Arts	6 s.h.
PSY 504	Adv. Educational Psychology	3 s.h.
PSY 511	Adv. Social Psychology	3 s.h.
PSY 535	Tests and Measurements	3 s.h.
	Total	36 s.h.

Mathematics Education

ED 596	Special Problems in Mathematics Teaching	3 s.h.
ED 615	Introduction to Educational Research	3 s.h.
ED 699	Research	3 s.h.
MA 401	Intermediate Differential Equations	3 s.h.
MA 421	Theory of Probability I	3 s.h.
MA 441, 513	Advanced Calculus I, III	6 s.h.
MA 527	Numerical Analysis	3 s.h.
MA 622	Vector Spaces and Matrices	3 s.h.
PSY 504	Advanced Educational Psychology	3 s.h.
ST 513	Experimental Statistics for Social Sciences I	3 s.h.
ST 514	Experimental Statistics for Social Sciences II	3 s.h.
	Total	36 s.h.

Biological Science

BO 421	Plant Physiology	4 s.h.
BO 441	Plant Ecology	3 s.h.
BS 501	Foundations of Modern Biology	3 s.h.
ED 597	Special Problems in Science Teaching	3 s.h.
ED 615	Introduction to Educational Research	3 s.h.
ED 695	Seminar in Science Teaching	1 s.h.
ED 699	Research	6 s.h.
GN 501	Principles of Genetics	3 s.h.
GN 540	Evolution	3 s.h.
PSY 504	Advanced Educational Psychology	3 s.h.
ZO	Animal Ecology	3 s.h.

ZO 614	Cell Physiology	3 s.h.
	Total	38 s.h.

Physics

ED 597	Special Problems in Science Teaching	3 s.h.
ED 615	Introduction to Educational Research	3 s.h.
ED 699	Research	6 s.h.
MA 401	Intermediate Differential Equations	3 s.h.
PSY 504	Advanced Educational Psychology	3 s.h.
PY 401	Mechanics	4 s.h.
PY 403	Electricity and Magnetism	4 s.h.
PY 410, 510	Nuclear Physics I, II	8 s.h.
PY 503	Introduction to Theoretical Physics	3 s.h.
	Total	37 s.h.

STANDARD V--PROFESSIONAL LABORATORY EXPERIENCES

The programs of agricultural education, industrial arts, industrial education, and mathematics and science do not provide professional laboratory experiences at the graduate level.

Students majoring in guidance or wishing to become school psychologists are provided with laboratory experience through practicum courses carrying six or twelve semester hours' credit.

Students majoring in guidance undertake field work in secondary schools, colleges, social service agencies, employment offices, and industrial establishments which carry on guidance and personnel work. They observe and participate in personnel services and study the organization and administration of programs. Practicum in counseling is provided through laboratory counseling experience under supervision and in supervised field experience in counseling.

Students preparing to become school psychologists obtain laboratory experience in the Psychological Clinic Practicum. A maximum of 12 semester hours may be earned in this course--one semester hour of credit is awarded for 135 clock hours of supervised clinical experience. At least half of this experience must be an "externship" in public school settings under supervision and in no case shall this be less than six credit hours. The remaining experience may be in the N. C. State Psychological Clinic or the Wake County Mental Health Center. Part of this requirement may be waived where paid assistantships provide similar experience. Training is provided in measurement of behavioral deviations, differential diagnosis, and learning difficulties by individual and group techniques. Training includes counseling with parents and consultation with teachers and other school officials as they relate to learning difficulties of children and behavioral and/or emotional difficulties.

STANDARD VI--FACILITIES, EQUIPMENT, AND MATERIALS

Most of the facilities and equipment in Tompkins Hall are used by both undergraduate and graduate students. Offices, classrooms, seminar rooms, and laboratories available for undergraduate work are also available for graduate work. Laboratories, seminar rooms, and classrooms used primarily for graduate instruction include: four rooms for graduate students in guidance, five rooms for graduate students preparing to become school psychologists, two rooms for graduate students in industrial education, two rooms for graduate students in agricultural education, and three rooms for graduate students in industrial arts education.

During the summer months, classrooms in the newly-erected air conditioned Harrelson Hall are used for courses in guidance and industrial education.

The D. H. Hill Library operates on a budget for the total instructional and research program. No allocation of funds is made for the graduate program per se. Because of the overlapping in the use of library materials by upper division undergraduate and graduate students, it is impossible to estimate the proportion of the budget used especially for graduate students. During the 1963-64 academic year, $294,330 was allocated by the D. H. Hill Library for books and periodicals of which $5,000 was allocated for professional education books in addition to sums expended for regular subscriptions and standing orders. Appropriate reference and research resources for graduate work, including an outstanding collection of documents, are available. Honor upper-undergraduate students and graduate students are eligible for stack permits.

Even though a new School of Education building will be included in the capital improvements requested during the 1965-67 biennium, further improvements for graduate programs are being planned in the facilities in Tompkins Hall. Among these are space for a curriculum and materials center in which all professional education materials will be centralized; providing additional office space to enable each graduate faculty member to have a private office; procuring additional library materials for use at the graduate level; and obtaining financial support to purchase calculators to benefit from the computer service in conducting educational research.

North Carolina State Library

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